

School of Psychology

**Exploring Mother-Child Relationships in the Context of
Early Environmental Stressors**

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Doctor of Philosophy
of
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DECLARATION

To the best of my knowledge and belief, this thesis contains no material previously published by any other person, except where due acknowledgement has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

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Date:

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ABSTRACT

For a small group of children, the exhibition of problematic levels of externalising behaviour continues throughout the early school years and into adolescence. The attenuated academic, social, and long-term outcomes seen in this group of children have not significantly improved across the last three decades.

The overall aim of the current research was to add weight to the growing body of empirical literature pointing to the need to consider child externalising behaviour as a possible consequence of dysregulation due to exposure to (1) early trauma and loss, (2) a non-optimal familial environment that is characterised by a primary caregiver who struggles with reflective functioning or adopts an emotion dismissing style with respect to emotion socialisation, or (3) both early trauma and a non-optimal familial environment.

To investigate the consequences of trauma exposure within the context of the early mother-child attachment relationship, two complementary studies were conducted. Study 1 used questionnaire responses from a community sample of mothers ($n = 314$) to test a theoretically-driven, cumulative-risk model of child aggression. Approximately 91% of children had encountered at least one potential environmental stressor, with the majority of children encountering three or more types, across 4 or more discrete incidences. Results suggested that adverse child outcomes were associated with high emotion lability/negativity, low adaptive emotion regulation, and post-traumatic stress symptoms. In turn, these mediating mechanisms were precipitated by child trauma exposure, low maternal reflective functioning, and the interaction between maternal emotion coaching and child trauma exposure. Strong, positive associations were noted between aggression and anxiety problems, withdrawn/depressed problems, and attention problems, indicating that child aggression may be part of a wider set of difficulties that the child must contend with, and may require assistance with if interventions are to be effective.

Study 2 used quantitative and qualitative responses from a sample of mothers with children who had been referred for behaviour-related clinical services ($n = 15$) to conduct a broader investigation into the often over-looked experiences of these parents, and to gain a clearer understanding of the nature of the emotional climate within affected families. Referred children had encountered between 2 and 9 trauma types, with 80% encountering 4 or more types. Six themes emerged during the

qualitative analysis: (1) Mother's views of their children; (2) mother's relationships with their children; (3) mother's relationship with affect; (4) intergenerational patterns; (5) difficulties faced by children; (6) difficulties faced by families. Results suggested that mothers of clinically affected children were in need of emotional and practical assistance. Extreme child behaviour reportedly impacted on all family members both directly, through contact, and indirectly, through the time, planning, financial resources, and emotional resources that needed to be exclusively dedicated to assisting referred children.

Overall, the findings of the present research appeared to indicate a series of recommendations related to the assessment and diagnosis of child aggression, and avenues for more efficacious interventions. With regard to assessment and diagnosis, it may be beneficial for an in-depth developmental history that documents early exposure to trauma, environmental stressors, and loss, including any clinically significant pre-natal complications or maternal factors, to be conducted by a multidisciplinary team. In addition, the early mother-child relationship, familial emotional environment, and presence of maternal mental health difficulties should be assessed and considered. Physically aggressive child behaviour should be demarcated from non-aggressive forms of misconduct.

Interventions may need to augment attempts to modify children's behaviour in isolation by incorporating strategies to modify the child's broader mental and social health and their environment, including the behaviour of important adults in the child's life. Assisting children to regulate their behaviour, while teaching and modelling developmentally appropriate alternative behaviours to aggression, and reinforcing reconciliation skills appear to be appropriate, as this learning may not have occurred in early childhood. Treatment strategies may benefit from the acknowledgement of trauma exposure, adverse familial factors, and child internalising problems. These comorbid areas have been largely ignored in current programs, potentially providing one explanation for the poor outcomes presently observed. Mothers in particular should be provided with assistance to improve their reflective functioning capacity and propensity to engage an emotion coaching approach to emotion socialisation.

Finally, parents and family members require support and assistance to effectively manage the challenge and responsibility of raising a child who exhibits clinical levels of aggressive behaviour. In its current form, service provision in this area may not be meeting the needs of affected parents.

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CHAPTER 1

INTRODUCTION

In 2002, the Ministerial Council on Education, Employment, Training and Youth Affairs raised concerns about ongoing and growing reports of student behavioural problems in Australian schools (de Jong, 2005). Further, the academic, social, and long-term outcomes for children with emotional and behavioural disorders have not significantly improved across the last three decades (Bradley, Doolittle, & Bartolotta, 2008). Effectively supporting children who exhibit challenging behaviours and associated mental health problems, represents an important goal for contemporary mental health professionals, schools, and parents, both nationally and internationally (Browne, Cashin, & Graham, 2012).

In young people aged 4 to 18 years, the recurring exhibition of physical aggression, disobedience or oppositionality toward authority, impulsivity or hyperactivity, attention deficit-type behaviours, delinquent behaviour, destruction of own or others' property, nervous or anxious behaviour, or labile mood, are typically considered problematic, and are labelled as *externalising behaviours* (Achenbach, 1991; Browne et al., 2012; Campbell, Spieker, Burchinal, Poe, & The NICHD Early Child Care Research Network, 2006; Frick, 2006; Grossman, 2005; Miner & Clarke-Stewart, 2008; Sentse, Veenstra, Lindenberg, Verhulst, & Ormel, 2009; Tremblay, Vitaro, Gagnon, Piche, & Royer, 1992). Externalising behaviours are common and normative amongst young children, and tend to reduce in frequency across the elementary school years (Cote, Vaillancourt, Barker, Nagin, & Tremblay, 2007; Seguin, Parent, Tremblay, & Zelazo, 2009; Shaw, Lacourse, & Nagin, 2005). However, for a small group of children, externalising behaviours continue into adolescence and adulthood, and tend to be pervasive across cognitive, social, and communication domains (Browne et al., 2012).

At school, these children are more likely to be disruptive (Grossman, 2005), struggle with completing tasks that require extended periods of concentration (Browne et al., 2012), and are and make poor academic progress (Campbell et al., 2006). Socially, they are more likely to struggle with social adjustment, friendship formation (Browne et al., 2012), and the ability to accurately interpret social cues (Frick, 2006). Further, these children are more likely to be aggressive with their peers, bully their peers (Browne et al., 2012; Frick, 2006), and encounter rejection from their peers (Campbell et al., 2006; Cote et al., 2007). These children also tend not to respond to traditional forms of discipline (Grossman, 2005), and are more likely to drop out of school

(Browne et al., 2012). As they reach adolescence and adulthood, externalising children are more likely to encounter difficulties maintaining relationships and employment (Browne et al., 2012). They are also more likely to manifest anti-social (Frick, 2006; Loeber, Burke, Lahey, Winters, & Zera, 2000), or violent behaviour (Brame, Nagin, & Tremblay, 2001; Cote et al., 2007). Finally, this population is also more likely to encounter drug abuse, criminality (Brame et al., 2001), early pregnancy, and psychopathology (Loeber et al., 2000).

Clouding the early and reliable identification of children who will go on to adhere to this adverse life-course trajectory, externalising behaviours appear to be the manifestation of complex and multifaceted developmental processes, involving unique patterns of interactions between genetic and environmental influences across the lifespan (Rutter, 2009, 2011; Sawyer et al., 2001). Clusters of risk mechanisms, rather than isolated causes, tend to be implicated (Gutman, Sameroff, & Cole, 2003; Rutter, 2009), and the majority of children who do exhibit heightened levels of externalising behaviour early in life desist prior to adolescence or adulthood (Cote et al., 2007; Seguin et al., 2009; Shaw et al., 2005).

This complexity poses a challenge to researchers, clinicians, teachers, and parents alike. Although problematic behaviours are often evident early (Barker & Maughan, 2009; Olson, Lopez-Duran, Lunkenheimer, Chang, & Sameroff, 2011), emotional and behavioural disorders are usually amongst the last of the special needs or disability types to receive specialised attention (Browne et al., 2012). Frequently, challenging and inappropriate behaviour is erroneously considered a problem of discipline. It is not until children fail to respond to usual discipline and punishment standards that professional assistance may be sought (Browne et al., 2012).

To address this situation, researchers from a range of disciplines and specialties are searching for factors that can reliably differentiate between the group of early externalising children who will continue to exhibit problematic levels of externalising behaviours and those who will conform to normative desisting trends. Olson and colleagues (2011) stated that investigations of clinical child behaviour have tended to be approached from one of three relatively separate domains of inquiry, namely disturbances in the development of self-regulation, non-optimal parenting, or delayed socio-cognitive competence. Their longitudinal study, which claimed to be one of the first attempts to bring these three disparate literatures together, reported that higher levels of peer aggression in particular was associated with lower levels of self-

regulation and lower levels of theory of mind understanding, as well as higher levels of adverse parenting (Olson et al., 2011).

The present research brings the three domains highlighted by Olson and colleagues (2011) together by conceptualising child emotion regulation as a central construct that is influenced by children's experiences and parenting practices and, subsequently, influences children's socio-cognitive competence and behavioural outcomes. Indeed, the importance of healthy emotion regulation development has attracted significant attention in the recent literature (Calkins, 2010).

Optimal parenting behaviours have been highlighted as one factor that facilitates the development of emotion regulation (e.g., Lunkenheimer, Shields, & Cortina, 2007). In turn, healthy emotion regulation has been associated with positive child outcomes (Willemen, Goossens, Koot, & Schuengel, 2008), including an improved ability to socialise and form relationships outside the family, and the healthy development of socio-cognitive competencies (Fonagy & Target, 2003; Fonagy, Gergely, Jurist, & Target, 2002).

On the other hand, early exposure to single or recurring stressors, including traumatic events and significant loss, may disrupt the development of emotion regulation (Fonagy & Target, 2003; Greenwald, 2002). In turn, disrupted emotion regulation has been associated with externalising behaviours, internalising behaviours, poorer resilience in the face of environmental stressors, and later difficulties with social competencies (Fonagy & Target, 2003; Greenwald, 2002).

At present, our understanding of risk factors and the mechanisms underpinning the associations between risk factors and problematic outcomes in children remains incomplete, particularly in the age range from infancy to school age (Chang, Olson, Sameroff, & Sexton, 2011; Bayer, Hiscock, Ukoumunne, Price, & Wake, 2008). In order to offer appropriate diagnostic and intervention options with the aim of assisting children to navigate away from an adverse life-course trajectory, a more complete account of early problematic behaviours is required (Rutter, 2009). The present research was undertaken in an attempt to make a contribution toward this important goal.

1.1 Aim and Scope of the Research

Externalising behaviours represent the observable outcome of a wide range of interacting child vulnerabilities and strengths, environmental events, and risk-enhancing or risk-buffering parental factors (Greenwald, 2002). The emotion-regulatory difficulties observed in children who exhibit externalising behaviours throughout the early developmental period indicate that the optimal development of this important capacity has encountered significant disruption (Greenwald, 2002). A history of exposure to environmental stressors, particularly trauma or significant loss, has been identified as a factor that appears to disrupt healthy emotion regulation development. On the other hand, attachment-based familial factors, including parental reflective functioning capacity and emotional styles, have been identified as capable of promoting the development child emotion regulation. Currently, these salient factors are not considered in the clinical diagnostic nosology, and are rarely acknowledged in popular approaches to intervention, potentially rendering ameliorative efforts inefficacious (Priddis, Landy, Moroney, & Kane, 2014; Tremblay, 2006).

The overall aim of the current research was to add weight to the growing body of empirical literature pointing to the need to consider child externalising behaviour as a possible consequence of dysregulation due to exposure to (1) early trauma and loss, (2) a non-optimal familial environment that is characterised by a primary caregiver who struggles with reflective functioning or adopts an emotion dismissing style with respect to emotion socialisation, or (3) both early trauma and a non-optimal familial environment.

To achieve the overall aim, two complementary studies were conducted. Each was designed to elucidate a clearer understanding of the relationship between early trauma, the familial environment, and the expression of externalising behaviour in children. In the first study, a comprehensive but concise model of attachment-related risk-factors and mechanisms underpinning problematic child aggression was proposed and empirically tested using a community sample of children and their mothers. In the second study, a sample of mothers with clinically disruptive children was used to conduct a broader, qualitative investigation into the often over-looked experiences of these parents, and to gain a clearer understanding of the nature of the emotional climate within affected families.

1.2 Overview of Thesis

In the present research, the exhibition of child externalising behaviour was investigated within the context of a group of salient factors facilitating the pathway from potential risks to problematic outcomes. Non-optimal parenting factors and child exposure to early trauma and loss were investigated as potential risks. Child emotion regulation, affect lability/negativity, and post-traumatic symptoms were investigated as potential mediators. Amongst potential outcomes, child aggression was of particular interest.

Chapters 2 to 5 present a summary and critique of the current, relevant literature beginning with the problematic outcome of aggression, followed by the underpinning role of emotion regulation, and finally, a selection of primary risk factors associated with parenting and child exposure to environmental stressors.

Chapter 2 provides a brief critique of the research literature pertaining to the study of externalising behaviours, which has tended to be confounded by inconsistencies. The diagnostic criteria of three common clinical disorders related to problematic child behaviour, namely *oppositional defiant disorder*, *conduct disorder*, and *attention deficit/hyperactivity disorder*, are outlined, and recent estimates of the prevalence of child behavioural disorders and mental health issues in Australia are then presented. A brief critique of diagnostic categories is then discussed, followed by an introduction to aggressive behaviours, a sub-set of externalising behaviours that tend to characterise the group of children who exhibit chronic and severe outcomes.

Chapter 3 explores child emotion regulation, which is proposed to be a critical mediator of the relationship between risk factors and problematic child outcomes. A brief definition of emotion regulation is provided, followed by a critique of the investigative literature. The importance of emotion regulation as both a preventative and risk factor with respect to child externalising behaviour is discussed. Finally, the environmental conditions required for the healthy development are detailed, and contrasted with factors that may disrupt the development of this capacity.

Within the context of attachment theory, Chapter 4 explores salient parenting factors that have been implicated in child externalising behaviours. The nature of early attachment relationships will be outlined, with a focus on their relevance to the development of child emotion regulation. In particular, maternal reflective functioning capacity, maternal emotional styles, and adverse maternal factors will be investigated.

Early exposure to trauma and loss are then considered as potential sources of disruption to the development of emotion regulation. Prevalence rates of exposure are followed by a discussion of the adverse effects of trauma exposure, including associations between trauma exposure and diagnoses of clinical behavioural disorders. Finally, parenting factors are re-examined for their potential to act as a buffer against the deleterious effects of trauma exposure.

Chapter 5 outlines the rationale for the research and the methodological approach employed. The key aims of the research are proposed, and the theoretical model to be tested is introduced. The overall plan for conducting two related, but independent, studies to meet the research aims are detailed.

Chapters 6 and 7 report and discuss the results of the two studies conducted in the present research. Chapter 6 relates to Study 1, a quantitative investigation of the proposed model using a large community sample. Chapter 7 relates to Study 2, and presents the findings of a quantitative investigation of a small sample of clinically-disruptive children. This is followed by an exploration of the core themes that emerged during the thematic analysis of qualitative, semi-structured interviews that were conducted with the mothers of these children.

Chapter 8 consists of a final discussion of the results, outlining the key findings, theoretical implications, clinical implications, limitations of the research, and recommendations for future research. Finally, a brief set of conclusions is drawn.

CHAPTER 2

THE STUDY OF CHILD EXTERNALISING BEHAVIOURS

Several factors have added to the complexities inherent to the study of problematic child behaviour, and have contributed to the range of discrepant, and occasionally contradictory, findings observed in the literature (First & Tasman, 2004). Most significantly, the precise object of study has often been confounded by the lack of common and consistent language (Tremblay, 2006). Broad behavioural categories such as ‘externalising’, ‘delinquent or antisocial’ (e.g., stealing, running away, drug-use), and ‘conduct disorder’ (e.g., rule violations, aggression) have been inconsistently defined, have included or excluded various combinations of individual behaviours, and have frequently and erroneously been considered interchangeable with each other (Tremblay, 2006).

Similarly, behavioural sub-categories such as ‘bullying’, ‘violent behaviour’, ‘disruptive behaviour’, and ‘physical aggression’ have been inconsistently defined and erroneously considered interchangeable (Tremblay, 2006). Further, behavioural classifications used to inform research are often erroneously considered interchangeable with clinical diagnoses (Rutter, 2011).

Finally, systematic reviews of intervention efficacy, health services, and clinical practice guidelines in Australia have tended to focus on the treatment of single, discrete mental disorders (Andrews, Henderson, & Hall, 2001). Minimising the complex reality of child and adolescent mental health problems fails to address the high level of co-occurring difficulties across the range of adverse environmental and personal factors observed in these children’s lives (Sawyer et al., 2001).

2.1 Clinical Diagnoses

Standardised psychological constructs are essential for research, for identifying pathological deviance, and for assisting affected children (Achenbach, Dumenci, & Rescorla, 2003). At present, the majority of current research studies, program development studies, and intervention efficacy studies are based on criteria set out in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth-Edition, Text Revision* (DSM-IV-TR; American Psychiatric Association [APA], 2000). However, with the recent release of the DSM-V (APA, 2013), research and epidemiological studies

will begin to investigate behavioural disorders according to the revised classifications and diagnostic criteria.

In the DSM-IV-TR, child externalising behaviour problems were broadly classified as *Disruptive Behaviour Disorders*. Specific diagnoses include *Oppositional Defiant Disorder* (ODD), *Conduct Disorder* (CD), and *Attention-Deficit/Hyperactivity Disorder* (ADHD), depending on the child's particular symptom profile (APA, 2000). In the DSM-V, ODD and CD are now grouped together with a range of other disorders characterised by difficulties with emotional and behavioural self-control under the new heading of *Disruptive, Impulse-Control, and Conduct Disorders* (APA, 2013). Importantly, although noting the high level of comorbidity between the disorders within this classification and ADHD, in the DSM-V, ADHD has been classified as a *Neurodevelopmental Disorder* (APA, 2013).

In the DSM-V (APA, 2013), diagnostic criteria for ODD have been refined from those set out in DSM-IV-TR (APA, 2000). Two main changes are worth noting here. First, the DSM-V groups symptoms into three types (angry/irritable mood, argumentative/defiant behaviour, vindictiveness) in order to better acknowledge both the emotional and behavioural facets of this disorder. Second, stricter guidance as to the frequency of symptomatic behaviour has been included, reflecting the finding that many of the behaviours deemed pathological are actually common in normally developing children and adolescents (APA, 2013).

Children diagnosed with ODD commonly have temperament-related emotional reactivity and poor frustration tolerance (APA, 2013). Children diagnosed with ODD often have histories that include multiple primary caregivers over time, inconsistent or harsh discipline, neglect, family histories of psychopathology, and marital discord (APA, 2000). The DSM-V acknowledges that adverse parenting practices, including those that are harsh, inconsistent, or neglectful, may play an important role in many causal theories of the disorder (APA, 2013).

The DSM-V (APA, 2013) diagnostic criteria for CD do not differ from those listed in the DSM-IV-TR (APA, 2000). However, a specifier has been added to demarcate children who also present with a callous and unemotional interpersonal style, as these children tend to demonstrate a more severe form of CD that does not respond to common treatments (APA, 2013).

Two CD *types*, based on age of onset are specified. *Child-Onset Type*, requires that at least one characteristic of CD be present prior to 10 years of age. *Adolescent-Onset Type*, requires that no characteristics of CD be present prior to 10 years of age, and is usually diagnosed before 16 years of age (APA, 2013). Relative to Adolescent-Onset, Child-Onset tends to be associated with a greater range of dispositional and contextual vulnerabilities (APA, 2000, 2013; Barker & Maughan, 2009; Frick, 2006; Frick & Dickens, 2006; Greenwald, 2002). This group of children also exhibit more severe, persistent, and aggressive symptomatic behaviours (Barker & Maughan, 2009; Frick, 2006; Tremblay, 2006). However, at least half of Child-Onset individuals conform to a desisting trajectory of problematic behaviour (Nagin & Tremblay, 1999).

CD is reported to consist of both a genetic and environmental component (APA, 2000), and tends to be best understood as a physically aggressive child in the context of familial dysfunction (First & Tasman, 2004). Indeed, twin studies have suggested that shared family, peer, and environmental factors play a significant role in CD (First & Tasman, 2004).

Similarly, the diagnostic criteria for ADHD in the DSM-V (APA, 2013) remain largely unchanged from those listed in the DSM-IV-TR (APA, 2000). However, some refinements have been made to better reflect empirical findings, and ADHD has been re-classified as a neuro-developmental disorder (APA, 2013). Children diagnosed with ADHD have histories that may include child abuse or neglect, negative parent-child interactions, unstable foster placements, infections, and exposure to neurotoxins or (maternal), and prenatal drug use (APA, 2000). Family histories of psychopathology are also prevalent (APA, 2000, 2013).

Importantly, for ODD, CD, and ADHD, despite the acknowledgement of the potential presence or contribution of environmental factors, neither the specific DSM-based diagnostic labels applied, nor recommended approaches to treatment, are modified in light of the presence or absence of salient environmental factors. Further, the potential presence of comorbid, or causal, post-traumatic stress symptoms is not explicitly referred to. Interestingly, it is advised that a diagnosis of *Adjustment Disorder* with *Disturbance of Conduct* or *Mixed Disturbance of Emotions and Conduct* be considered prior to making a diagnosis of CD (APA, 2000, 2013). However, it is worth noting that in the development of ADHD, twin studies suggest that shared family, peer, and environmental factors play a relatively small role (e.g., Sherman, Iacono, & McGue, 1997), concordant with the re-classification of this disorder in the DSM-V.

2.1.1 Prevalence of behavioural disorders: International.

Epidemiologic studies suggest that ODD, CD, and ADHD affect approximately 10% of children. Between one third and two thirds of clinically referred children present with one, or more, of these diagnoses (Ford et al., 2000; Kazdin, 2005).

Due to the transitory nature of oppositional behaviour and its normative role in the maturation process, diagnosis can be problematic (APA, 2000). Canino, Polanczyk, Bauermeister, Rohde, and Frick's (2010) meta-analysis found that geographic location was not a significant predictor of ODD, and it was estimated to affect between 1% and 11% of the worldwide community, with an average prevalence of approximately 3.3%. The authors attributed the observed heterogeneity in results to disparate diagnostic criteria and methodological approaches employed across studies (Canino et al., 2010). ODD symptom onset usually occurs prior to early adolescence, and often before eight years of age. Gender differences are not apparent after puberty, though pre-pubescent males are more likely to attain a diagnosis of ODD than are pre-pubescent females (APA, 2000, 2013).

Reflecting the findings for ODD, Canino and colleagues' (2010) meta-analysis found that geographic location was not a significant predictor of CD. CD has an estimated prevalence in the community of between 2% and 10% (Costello et al. 2005), with an average of 3.2% (Canino et al. 2010). Approximately 3 to 5% of pre-adolescent boys, and 6 to 8% of adolescent boys meet the criteria for CD (Frick, 2006). Approximately 0.75-1.25% of pre-adolescent girls, and 3-4% of adolescent girls meet the criteria for CD (Frick, 2006). CD constitutes the most salient psychiatric diagnosis for excessively violent and aggressive youths (Connor, Steingard, Cunningham, Anderson, & Melloni, 2004; Tremblay, 2006). Comorbid diagnoses of ADHD, Learning Disorders, Anxiety Disorders, Mood Disorders, and Substance-Related Disorders are common (APA, 2000, 2013).

Polanczyk, de Lima, Horta, Biederman, and Rohde's (2007) meta-analysis suggested that, in most cultures, ADHD affected approximately 5% of children. Diagnoses below 5 years of age are problematic, though many parents note symptoms from toddlerhood (APA, 2000, 2013). Approximately 50% of children diagnosed with ADHD have a comorbid diagnosis of ODD or CD (APA, 2000). Comorbid diagnoses of Mood

Disorders, Anxiety Disorders, Learning Disorders, and Communication Disorders are common (APA, 2000, 2013).

2.1.2 Prevalence of behavioural disorders: Australia.

The Australian Commonwealth Department of Health and Aged Care, in conjunction with Adelaide University, conducted the *Child and Adolescent Component of the 1998-1999 National Survey of Mental Health and Well-Being* to discern prevalence estimates of child and adolescent mental health problems in Australian households, the degree of disability associated with these disorders, and the pattern of service utilisation amongst this young population (Sawyer, Arney et al., 2000; Sawyer, Kosky et al., 2000). The representative national sample included responses from 4509 households with children aged 4 to 17 years (Sawyer et al., 2001).

Amongst children aged 6 to 17 years, ADHD was reported to be the most prevalent mental disorder (11%) (Sawyer et al., 2001). CD and Depressive Disorder each had a prevalence of 3% (Sawyer et al., 2001). Boys were significantly more likely to meet the diagnostic requirements for ADHD and CD than were girls (Sawyer et al., 2001). Of the 14.2% of children who met the diagnostic criteria either for CD, ADHD, or Depressive Disorder, approximately 23% also met the diagnostic criteria for at least one other comorbid diagnosis.

Children falling within the clinical range for one or more mental health concerns were significantly more likely to live in a low-income household, live with a single parent or step/blended family, have parents who left school at an early age, and have parents who were unemployed (Sawyer et al., 2001). Further, relative to non-clinical children, clinical children were reportedly had poorer levels of physical health and mental health (Sawyer et al., 2001). In addition, the perceived adverse impact of child emotional and behavioural difficulties on family, peer, and school activities, respectively, were rated as significantly higher for this group, as were the emotional impact and time impact on parents (Sawyer et al., 2001).

Recently, and specific to the Western Australian population, the *Western Australian Health and Wellbeing Surveillance System* constitutes an ongoing survey of a range of factors related to child health and well-being, intended to (1) inform health education programs, (2) evaluate interventions, (3) inform health policy development, and (4) identify and monitor emerging trends in health and well-being (Patterson, Joyce, &

Tomlin, 2012). The 2011 report (Health and Well-Being of Children in Western Australia, 2011; Patterson et al., 2012) included survey responses from approximately 6,930 parents/carers, usually the mother. Overall, 8.3% of 5 to 9 year-olds and 4.7% of 10 to 15 year-olds were reported as experiencing difficulties with emotions, concentration, behaviour, or getting on with people. According to self-reports, 13.5% of parents/carers had been diagnosed by a doctor with depression, anxiety, stress, or another mental health disorder in the previous 12 months. Further, 11.6% reported currently being treated for this condition (Patterson et al., 2012).

The *Raine Study* (Robinson et al., 2008), a prospective cohort investigation, recruited 1707 Western Australian families during pregnancy (18 weeks gestation), and undertook follow-up interviews at 2 and 5 years of age. At the 5-year follow-up, 14.1% of children fell within the clinical range internalising problems, and 12.9% fell within the clinical range for externalising problems (Robinson et al., 2008). Multinomial logistic regression analysis revealed five significant risk factors for child behaviour problems at age five, namely multiple maternal stress events during pregnancy, maternal prenatal cigarette smoking, breastfeeding for a shorter time, multiple symptoms of postnatal depression, and male child gender (Robinson et al., 2008).

2.1.3 Criticisms of clinical diagnostic categories.

Although diagnostic categories have been useful in identifying various clusters of behavioural, emotional, and cognitive symptoms, recent advances in the understanding of externalising behaviours has given rise to several criticisms. Four of these are outlined below.

First, Rutter (2011) argues that symptom-based approaches to diagnosis or classification are too simplistic, and fail to outline potential causes and underlying mechanisms. Current diagnostic categories do not recognise the contribution of early relationships or emotional experiences, which have both been identified as aetiologically salient (Shaw et al., 2005). Indeed, two individuals may arrive at the same set of behavioural outcomes despite very different causal pathways (Rutter, 2011). Concordantly, First and Tasman (2004) concluded that there is no single aetiology for ADHD, CD, or ODD, respectively.

Second, Andrews (2000) claims that there are no objective means of testing the validity of criteria. There are no studies decreeing that an individual with a certain diagnosis

displays specific genetic relationships, physiological abnormalities, or treatment outcomes (Andrews, 2000). At this time, procedures for detecting potentially affected physiological structures, such as those associated with child abuse or ADHD, are not appropriate for diagnosis at an individual level (Rutter, 2011).

Third, classifications do not imply disease, and there is still debate as to whether a psychiatric syndrome can legitimately be considered a disease (Rutter, 2011). The presence of symptoms of distress or reduced functioning, are neither necessary nor sufficient to indicate the presence of a medical disorder (Rutter, 2011). Further, the dimensional nature of diagnostic criteria in both the DSM and ICD-10 prescribe that an individual may have one too few symptoms, or have experienced symptoms for too short a period, to receive a diagnosis, but once an additional symptom is experienced, or an additional day of suffering passes, they are then declared to be living with a disorder (Andrews, 2000).

Finally, the diagnostic criteria included in the DSM were derived largely via an a-theoretical, 'top-down' approach, with diagnostic categories decided first, and then criteria formulated (Achenbach et al., 2003). Changes to categories, cut-offs, and diagnostic requirements in different editions of the DSM reflect the post-hoc attempt to refine these artificially constructed disorder categories to better align with the clinical observations and outcomes (Bailey & Ostrov, 2008; First & Tasman, 2004; Guttman-Steinmetz & Crowell, 2006). This approach has continued with the recently published DSM-V (APA, 2013).

Indeed, with respect to CD criteria, the use of 'age of onset' as a marker of psychopathology has been criticised for being based on a single measurement, and is often susceptible to the unreliable nature of recall (Loeber et al., 2000). Further, the Adolescent-Onset type is potentially an artefact of the inclusion of items empirically unrelated to physical aggression, including truancy, drug use, vandalism, and theft (Tremblay, 2006). Relative to Child-Onset children, endorsement of items related to physical aggression is less pronounced in this group (Aguilar, Sroufe, Egeland & Carlson, 2000; Vitaro, Brendgen, & Barker, 2006). Further, girls tend to be more likely to employ social aggression, and the lack of inclusion of social-aggression symptoms in diagnostic criteria may contribute to the under-representation of girls (Loeber et al., 2000).

There exists a consensus that CD and ADHD are distinct diagnoses (Loeber et al., 2000). The distinctions between ODD and ADHD, however, are less well defined. Although children with ADHD hyperactive/impulsive type are at elevated risk for comorbid ODD, ODD symptoms tend to emerge later than ADHD symptoms and peak at eight years of age before desisting, whereas ADHD symptoms emerge earlier and may persist (First & Tasman, 2004).

Although children with a diagnosis of ODD tend to have less adverse impairments and outcomes, the empirical distinctions between ODD and CD are not well defined (First & Tasman, 2004). Children with a diagnosis of either ODD or CD tend to experience common areas of difficulty, particularly academically and socially, as well as the core symptom of impulsivity (First & Tasman, 2004). ODD has been considered a developmental precursor to, or less severe form of, CD early-onset type (First & Tasman, 2004). Approximately 90% of CD children meet the criteria for ODD, though most ODD children do not subsequently receive a diagnosis of CD (First & Tasman, 2004).

Empirical studies suggest that a syndrome comprised of ODD behaviours and the set of aggressive CD behaviours, and a second syndrome comprised of non-aggressive CD behaviours might better account for the empirical findings (Loeber et al., 2000). Indeed, in its current form, the CD construct has been criticised as arbitrary, given that animal models of aggression have not been able to replicate a corresponding constellation of behaviours (Connor et al., 2004).

The DSM-V (APA, 2013) explicitly acknowledges the growing body of empirical evidence suggesting that disorders characterised by disruptive behaviour, difficulties with impulse-control, and disordered conduct may belong to a common externalising spectrum. However, the authors concede “the specific nature of the shared diathesis that constitutes the externalising spectrum remains unknown” (APA, 2013).

In contrast to the ‘top-down’ approach of the DSM, Achenbach and colleagues (2003) undertook a theoretical-rational, deductive, ‘bottom-up’ approach to the categorisation of externalising behaviours via multivariate analyses of large data samples. CBCL items were grouped into symptom clusters based on empirical, statistical associations. Importantly, the DSM-based Conduct Problems scale was better explained by two empirically distinct subsets of symptoms, namely Aggressive Behaviours, and (non-aggressive) Rule-Breaking Behaviours. The DSM-based scale for Attention Problems

was similar to its empirically-based counterpart. However, the DSM-based Affective Problems and Anxiety Problems scales did not reflect their empirically-based counterparts, Withdrawn/Depressed and Anxious/Depressed, respectively. The authors suggested that this was due to the DSM distinguishing between anxious and depressive symptoms, although empirical studies often find these to co-occur (Achenbach et al., 2003).

Similarly, empirically-driven investigations have elucidated three developmental pathways to conduct problems and delinquent behaviour: (1) a 'covert pathway' beginning with minor covert behaviours, then property damage, and finally more serious forms of delinquency; (2) an 'authority conflict pathway', whereby stubborn behaviour progresses into defiance and avoidance of authority, and; (3) an 'overt pathway', whereby minor aggression progresses to physical fighting then more severe violent behaviour (Loeber et al., 2000). The third pathway is most pertinent to the current study, and will be discussed in the next section.

2.2 Childhood Aggression

A focus on early aggression has been identified as clinically important, as it appears to demarcate children whose behavioural problems will abate with age from those whose difficulties will continue into later life (First & Tasman, 2004). Aggressive behaviour is a central feature of conduct disorders, and has been highlighted as clinically significant both within the context of CD, and as an isolated issue (Levac, McCay, Merka, & Reddon-D'Arcy, 2008).

Similar to the study of externalising behaviours, the study of aggression has been confounded by the relatively inconsistent inclusion or exclusion of individual behaviour-types across studies, such as acts of non-violent physical aggression, verbal threats of aggression, or social aggression (Tremblay, 2006). Aggression is considered a broad domain for which a universally accepted definition has yet to be developed (Connor et al., 2004; de Lange & Olivier, 2004). Connor and colleagues (2004) assert that aggression is a construct consisting of a set of behaviours that may be considered in isolation, or as a symptom of a broader psychiatric diagnosis such as CD, ADHD, depression, bipolar disorder, or *Post-Traumatic Stress Disorder* (PTSD).

Early aggression is best viewed in the context of normative child development. Due to a restricted range of social, cognitive, and expressive tools available to children during

the early years of development, physical aggression represents one useful strategy for achieving goals and enacting revenge (Vitaro et al., 2006). Thus, aggressive, impulsive behaviours, and non-compliance are common throughout infancy and toddlerhood, tending to peak in frequency at approximately two and a half years of age (Broidy et al., 2003; Chang et al., 2011; Olson et al., 2011; Spieker, Larson, Lewis, Keller, & Gilchrist, 1999; Tremblay, 2006; Vaillancourt, Miller, Fagbemi, Cote, & Tremblay, 2007). These behaviours then tend to abate across the pre-school period, as children rapidly develop new skills, learn to regulate their affect and behaviour, and learn to control aggressive impulses (Olson et al., 2011).

By the time they enter school, most physically aggressive children have adopted alternative behaviours (Broidy et al., 2003; Cote, Vaillancourt, LeBlanc, Nagin & Tremblay, 2006; Loeber & Stouthamer-Loeber, 1998; Nagin & Tremblay, 1999; NICHD Early Child Care Research Network, 2004; Tremblay et al., 2004). However, overall levels of aggression appear to remain relatively constant, with levels of non-physical, covert, indirect, or relational aggression tending to increase across the pre-school period and adolescence to meet the same needs (Osterman et al., 1998; Vitaro et al., 2006).

Semi-parametric group-based modelling is a statistical tool that permits individual-centred analyses, identifying clusters of individuals within a population who tend to co-vary, or share similar trajectories, on particular outcome measures over time (Vitaro et al., 2006). Longitudinal studies tracking levels of physical aggression in children, including US, Canadian, and New Zealand cohorts report that only approximately 4-5% of children do not conform to the desisting trend of physical aggression use (Broidy et al., 2003; Cote et al., 2006; Loeber & Stouthamer-Loeber, 1998; Nagin & Tremblay, 1999; NICHD Early Child Care Research Network, 2004; Tremblay et al., 2004). By six years of age, distinct trajectories tend to be identifiable and stable, usually consisting of a high/chronic group (~3-5%), a late-desisting group (~22%), an early-desisting group (~22%), and a low-use group (~51%) (Tremblay, 2006). School-age children who are identified as belonging to the high/chronic group tend to have been highly physically aggressive earlier in life (Tremblay, 2006). Longitudinal studies have revealed no evidence of a group of low or moderately physically aggressive children whose aggressive behaviour then escalates during adolescence (Brame et al., 2001; Broidy et al., 2003; Nagin & Tremblay, 1999).

Different forms of aggression are associated with different risk factors, behavioural trajectories, clinical diagnoses, and responses to intervention (Connor et al., 2004). Children who tend to use only non-physical forms of aggression, such as social or indirect aggression, as opposed to children who use physical forms of aggression in conjunction with non-physical forms of aggression, has been highlighted as the first subdivision that has received prominent attention in the literature.

For most children, early oppositional behaviour and conduct problems are not physically aggressive in nature, and tend to peak at around eight years of age (First & Tasman, 2004). For a minority of children, oppositional behaviour and conduct problems are accompanied by physical aggression. For this group, problematic behaviours are more likely to continue throughout the lifespan, with more severe behaviours, such as muggings and sexual assaults, tending to emerge after 13 years of age, and severely aggressive behaviour and risk of incarceration continuing into adulthood (First & Tasman, 2004). Comorbid ADHD tends to further exacerbate the potential severity of outcomes for children who follow this trajectory (First & Tasman, 2004). For the small group of children whose conduct problems emerge in adolescence, in the absence of earlier oppositional behaviours or physical aggression, problematic behaviour tends to be non-aggressive in nature, and usually desists by adulthood (First & Tasman, 2004).

A second subdivision that has received significant attention in the literature highlights the functions or motivations underlying the aggressive behaviour. This literature demarcates between aggression that is reactive in nature and aggression that is proactive in nature (Crick & Dodge, 1996; Dodge & Coie, 1987; Vitaro et al., 2006).

Aggression that occurs in defensive reaction to, or as a consequence of, real or perceived threat, provocation, frustration, or emotionally distressing stimuli is categorised as *reactive* aggression (Connor et al., 2004; Crick & Dodge, 1996; Dodge & Coie, 1987; Vitaro et al., 2006). Its function is to retaliate and hurt the perpetrator of the perceived threat, and its motivation is defensive, impulsive, and immediate (Vitaro et al., 2006). Reactive aggression reportedly declines across childhood and adolescence, potentially driving the declining trends of observed physical aggression noted in longitudinal studies (Vitaro et al., 2006). Reactive aggression has been associated with temperaments that presuppose a disposition toward anxiety, reactivity, emotional dysregulation, and inattention (Vitaro et al., 2006). Environmentally, reactive aggression has been associated with physically abusive households, which may

present children with frequent exposure to threat or provocation, while simultaneously modelling violence as an acceptable expression of anger and a conflict management strategy (Shields & Cicchetti, 1998). Emotionally, reactively aggressive children tend to encounter difficulties with empathy, contextually appropriate displays of affect, and modulating the intensity of their emotions (Shields & Cicchetti, 1998). Cognitively, these children tend to exhibit hostile attribution biases, problem-solving deficits, socio-cognitive difficulties, and low verbal intelligence (Vitaro et al., 2006).

Aggressive behaviour that is acquired through social learning and external reinforcement, with the instrumental function of attaining anticipated rewards, is categorised as *proactive* aggression (Crick & Dodge, 1996; Dodge & Coie, 1987; Vitaro et al., 2006). Proactively aggressive behaviour is characteristically deliberate, coercive, callous, or unemotional in nature (Connor et al., 2004; Vitaro et al., 2006). It is typically accompanied by an absence of guilt or empathy, restricted affect, and the use of others for personal gain (Connor et al., 2004; Vitaro et al., 2006). Proactive aggression tends to emerge later in development than reactive aggression, and has been associated with aggressive familial role models who use aggression as a conflict resolution strategy or to meet personal goals, as well as a youth or family history of alcohol and substance abuse (Connor et al., 2004; Vitaro et al., 2006). Physiologically, in children who are callous and unemotional, the sympathetic nervous system tends to be under-reactive, in direct contrast to that of reactively aggressive children (Vitaro et al., 2006). Similarly, in direct contrast to reactive aggression, proactive aggression is purported to parallel the rising levels of social aggression observed from childhood through adolescence (Vitaro et al., 2006). Indeed, in a clinically referred sample Connor and colleagues (2004) observed that younger children were significantly more likely to use reactive aggression, whereas teenagers were significantly more likely to be proactively aggressive.

Although these constructs appear to be conceptually and empirically distinct, it has been noted that the correlation between these two types of aggression is high within individuals (Connor et al., 2004; Crick & Dodge, 1996; Dodge & Coie, 1987; Vitaro et al., 2006).

Clinically, these distinctions are perhaps best acknowledged in the diagnostic criteria for *Intermittent Explosive Disorder* (APA, 2013). Previously listed under the *Impulse-Control Disorders Not Elsewhere Classified* class of disorders in the DSM-IV-TR (APA, 2000), this disorder is now grouped with ODD and CD in the DSM-V under the newly

created *Disruptive, Impulse-Control, and Conduct Disorders* class of disorders. Intermittent Explosive Disorder acknowledges physically aggressive and non-physically aggressive outbursts (APA, 2013). However, aggression is required to be impulsive and/or anger-based, rather than pre-meditated or functionally driven (APA, 2013). Coccaro (2012) highlights the relative dearth of research pertaining to this diagnostic category, which may affect up to 2.7% of children, citing that it has only recently achieved the diagnostic validity sufficient for recognition in clinical practice and research. In support of the proposed underpinnings of aggressive behaviour being investigated in the present research, Coccaro (2012) reports that children diagnosed with intermittent explosive disorder tend to have histories that are characterised by physical and emotional trauma (Coccaro, 2012).

2.3 Summary

The study of problematic child behaviour is a complex pursuit that has a range of discrepant, and occasionally contradictory, findings. ODD, CD, and ADHD are relatively common, affecting approximately 10% of children, and between one third and two thirds of clinically referred children. Although diagnostic categories have been useful in identifying various clusters of behavioural, emotional, and cognitive symptoms, they have been derived largely from a-theoretical 'top-down' processes. Changes to diagnostic criteria, cut-offs, and classifications across different editions of the DSM, including the recently published DSM-V, have contributed to the range of confounds in the literature. Further, empirical data is beginning to bring the validity of these categories into question. Empirically-driven investigations have elucidated a developmental pathway to severe conduct problems and delinquent behaviour via an 'overt pathway', whereby minor aggression progresses to physical fighting then more severe violent behaviour. A focus on early aggression has been identified as clinically important, as the presence of this symptom appears to demarcate children whose behavioural problems will abate with age from those whose difficulties will continue into later life.

CHAPTER 3

CHILD EMOTION REGULATION

Understanding the way humans experience, manage, express, and communicate affect is of particular relevance to psychologists interested in the prevention of emotional and behavioural difficulties (Morris, Silk, Steinberg, Myers, & Robinson, 2007). The development of self-regulation, which has been defined as the ability to adaptively regulate the physiological, attentional, emotional, behavioural, cognitive, and social processes that operate in concert to determine an individual's experiences and behaviours, has been at the heart of investigations into this area of enquiry (Calkins, 2010). Within the broader construct of self-regulation, the emotion regulation sub-component has been of particular focus.

According to Thompson (1994), the core elements of emotion regulation are the internal and external processes that initiate, maintain, and modulate the experience, intensity, and expression of emotions. More specifically, emotion regulation relates to the dynamic processes and strategies that underpin the experience of emotional or affect-related psychological states (Calkins, 2010; Morris et al., 2007). These processes can be conscious or unconscious, internal or external, and influence the timing, duration, inhibition, and intensity of these experiences, often in order to adaptively achieve a particular goal (Alink, Cicchetti, Kim, & Rogosch, 2009; Calkins, 2010; Morris et al., 2007; Weems & Pina, 2010).

In addition, discussions of emotion regulation may incorporate the cognitions that accompany experiences of emotional or affect-related psychological states, how these cognitions are expressed, and how they influence physiological responses (Calkins, 2010; Morris et al., 2007; Weems & Pina, 2010). External processes involved in emotion modulation, including skills, behaviours, and the influence of other individuals, may also be considered components of emotion regulation (Morris et al., 2007).

In turn, the ability to regulate emotion facilitates a number of additional socio-emotional processes. Emotion regulation influences an individual's internal emotional experience, pattern of emotional expression and communication, ability to accurately recognise emotions in self and others, and ability to adaptively cope with negative arousal (Maughan & Cicchetti, 2002).

Paralleling the criticisms of the externalising behaviours literature, the construct of emotion regulation has been inconsistently investigated, with disparate methodologies, definitions, measures, and levels of analyses cited as confounding factors (Calkins, 2010; Eisenberg & Spinrad, 2004; Morris et al., 2007). Perhaps most notably, researchers have inconsistently separated or merged two related, but discrete, process associated with the regulation of emotion across studies (Dunsmore, Booker, & Ollendick, 2013; Shields & Cicchetti, 1998).

The first of these processes has been inconsistently labeled as either *emotion regulation* or *adaptive emotion regulation*. Adaptive emotion regulation refers to a narrower definition of the broader emotion regulation concept, and is defined as children's ability to "manage their emotional experiences and expressions to function well within the current situation. This ... may involve either increasing or decreasing the experience of particular emotions, depending on the context" (Dunsmore et al., 2013, p. 445). According to this narrower understanding, adaptive emotion regulation exerts an influence over child socio-emotional development by assisting children to "cope with stressful emotional experiences, and to express their emotions in ways that fit with social expectations and are developmentally appropriate" (Dunsmore et al., 2013, p. 445). Further confounds in the literature have arisen between studies employing the broader or narrower conceptualisation of the concept (Dunsmore et al., 2013; Shields & Cicchetti, 1998).

The second of these processes, labeled *emotion lability*, is defined as children's "rapidity in responding to emotion-eliciting stimuli and simultaneous difficulty in recovering from emotional reactions, especially negative emotional reactions" (Dunsmore et al., 2013, p. 445). Emotion lability is understood to be underpinned by deficits in effortful control, and is believed to exert an influence over socio-emotional development via its association with child sensitivity to emotion-inducing events. Relative to children with lower levels of lability, children with higher levels of lability tend to experience exaggerated physiological and affective responses, and both positive and negative emotional responses tend to be more easily elicited by a broad range of experiential cues (Dunsmore et al., 2013; Shields & Cicchetti, 1998).

Despite the range of confounds impeding the establishment of a clear and consistent body of empirical knowledge, the overall consensus appears to be that adaptive, flexible, and socially appropriate functioning in childhood is critically dependent on the successful development of emotion regulation (Morris et al., 2007). The importance of

the development of emotion regulation is investigated in further detail in the next section.

3.1 The Importance of Emotion Regulation

In children, the regulation of negative affect, such as anger and sadness, and the regulation of emotion-related behaviours have been highlighted as particularly salient (Morris et al., 2007). Children who have developed the ability to regulate their emotions to a higher degree, tend to be better equipped and motivated to modulate their emotional arousal in real-time (Kim & Cicchetti, 2010). In turn, these children are better able to organise their behaviours in an adaptive manner, and respond flexibly and in a socially acceptable manner, to the dynamic and ongoing demands placed on them by the environment (Kim & Cicchetti, 2010). Further, these children are more likely to be better able to reduce the adverse influences of negative affect on behaviour (Kim & Cicchetti, 2010).

In contrast, children who have not successfully developed the ability to regulate their emotions may encounter difficulties functioning within the environment (Alink et al., 2009). Deficits in emotion regulation tend to manifest as either the over-regulation of emotions, or the under-regulation of emotions (Keenan, 2000; Olson et al., 2011). Pertinent to the current research, the early onset of aggression has been associated with the under-regulation of emotion (Olson et al., 2011).

Bandon, Calkins, Grimm, Keane, and O'Brien's (2010) longitudinal study investigated child externalising behaviour, emotion regulation, social skills, and peer acceptance amongst a community sample of 440 children at age 2, and again at age 7. Longitudinal cross-lag models indicated that externalising behaviour problems and social skills tended to be relatively stable across the investigated period. Emotion regulation at two years was related to higher levels of concurrent social skills and lower levels of concurrent externalising behaviour. Emotion regulation at two years was also related to decreases in levels of externalising behaviour problems at age seven. Interestingly, reciprocal influences between externalising behaviour problems and emotion regulation were not observed, suggesting a one-way relationship from emotion regulation to externalising outcomes (Bandon et al., 2010).

Having established the importance of the successful development of emotion regulation for adaptive, flexible, and socially appropriate functioning, factors that

facilitate the development of this ability and those that disrupt its development are of interest to the present research. The next section looks at the development of child emotion regulation in closer detail.

3.2 The Development of Emotion Regulation

During their first few years of life, infants spend considerable time with their primary caregivers, who act as their primary conjugate to interactions with another human and later, the wider world, while providing a vital source of nurturance, learning, and protection (Bowlby, 1988). Experiences during early childhood, the period from birth to five years of age, are critical for brain development (Bayer et al., 2008), and establish the foundations for learning, behaviour, and physical and mental health that will be influential throughout an individual's life (Li, Mattes, Stanley, McMurray, & Hertzman, 2009). It is also during these first years of life that a foundation for self-regulation processes and skills, particularly those related to the control of negative affect, are established (Bayer et al., 2008; Calkins, 2010).

Once children reach pre-school and primary-school age, their social world rapidly expands. They must begin to rely on their emotion regulation abilities to negotiate novel interactions with new peers, situations, and authority figures, as well as to meet growing family and societal expectations (Kim & Cicchetti, 2010). The development of emotion regulation continues throughout the pre-school and primary-school years, and is influenced by the nature of the relationships and experiences encountered by the child. The ability to adaptively regulate negative affect has been associated with greater social competence and peer acceptance, in turn, leading to conditions optimal for further improvements in regulation (Kim & Cicchetti, 2010).

As with the development of aggression, the development of emotion regulation is a multi-determined process (Gottman, Katz, & Hooven, 1996; Morris et al., 2007). Temperament, neurophysiology, and cognitive development have each been highlighted as playing an important role (Morris et al., 2007). However, in the absence of trauma or significant environmental stressors during the first three-to-five years of life, the developmental progression of emotion regulation tends to be particularly sensitive to the nature of familial relationships, and the primary child-caregiver relationship in particular (Gottman et al., 1996; Kim & Cicchetti, 2010; Morris et al., 2007).

The ongoing, intimate interactions within the early familial environment provide the context within which children generate, experience, and process the great majority of their emotions (Lunkenheimer, Olson, Hollenstein, Sameroff, & Winter, 2011; Morris et al., 2007). The early development of emotion regulation is almost exclusively a dyadic process (Calkins, 2010). Initially, infants require external caregivers to regulate their emotion for them (Calkins, 2010). Over time, children gradually learn to co-regulate their emotion with the caregiver, transitioning to a greater reliance on self-regulation (Calkins, 2010). This process relies on children's internalising strategies for modulating their affect and their level of arousal during interactions (Calkins, 2010).

The nature of the strategies children internalise are heavily contingent on the nature of their caregiver's reactions to their children's emotions, reactions to their own emotions, reactions to emotionally-charged events, interpretations of emotionally-charged events, and strategies for coping with emotionally-charged events (Gottman et al., 1996). The more adaptive a caregiver's strategies and reactions, the more successfully the child and caregiver are able to actively co-regulate their affect during interactions, particularly those that are intense, difficult, or emotionally challenging in nature (Lunkenheimer et al., 2011). In turn, the child is more likely to successfully develop the ability to regulate their emotions outside of the child-caregiver relationship (Lunkenheimer et al., 2011).

3.3 Child Emotion Regulation and Behaviour Problems

Ramsden and Hubbard (2002) state that, although the constructs of emotion regulation and aggression are often strongly and negatively related, emotion dysregulation does not ensure aggressive behavioural outcomes, and aggressive behaviour is not always attributable to emotion dysregulation. Rather, a range of factors need be considered, consonant with the tenets of cumulative risk models.

In an early longitudinal study, Cole, Zahn-Waxler, Fox, Usher, and Welsh (1996) reported empirical evidence for the association between child emotion regulation and behaviour problems. Amongst a community sample of 79 preschool-aged children, the authors identified three groups of child emotional responses during a task designed to induce negative mood. These were inexpressive (over-controlled), highly expressive (under-controlled), and modulated (adaptive). Relative to the modulated group, the inexpressive children and highly expressive children were subsequently reported to exhibit higher levels of externalising behaviours, oppositional behaviours, ADHD

symptoms, and separation anxiety at school age. In addition, inexpressive children exhibited higher incidences of symptoms of anxiety and depression (Cole et al., 1996).

More recently, in one of the first studies to investigate the role of emotion regulation in bullying and victimisation behaviour, Shields and Cicchetti (2001) investigated the maltreatment status, emotion regulatory capacities, and bully-victim dynamics of a group of 267 low SES children aged 8 to 12 years. One hundred and sixty-nine of the children were classified as maltreated. The researchers noted that bully-victim dynamics were observable after a relatively short period of time, suggesting that, for affected children, bully-victim patterns of behaviour readily characterised approaches to interactions within novel social groups, and were indicative of pervasive interpersonal deficits. Maltreated children, particularly those who had encountered physical or sexual abuse rather than neglect, were both the most likely to bully their peers and the most likely to be victimised by their peers. Amongst maltreated children, boys and girls were at statistically equivalent risk for bullying and victimisation behaviour, including overtly coercive and aggressive peer-directed behaviour (Shields & Cicchetti, 2001). Bullies and victims appeared to possess poorer emotion regulation capacities than their non-bullying or victimised peers. The relationship between maltreatment and bully-victim behaviours was mediated by emotion (Shields & Cicchetti, 2001).

Teisl and Cicchetti (2008) investigated a sample of 167 maltreated children (76 physical abuse, 91 sexual abuse, neglect, or emotional maltreatment), and 100 control children, aged 6 to 12 years, from low SES backgrounds. Physical abuse was found to be significantly associated with a tendency toward misperceiving the ambiguous intentions of others as hostile, easy access to aggressive responses to conflict, and a poorer ability to regulate emotion. In turn, these variables significantly predicted peer ratings of aggressive and disruptive behaviour (Teisl & Cicchetti, 2008). Amongst maltreated children who had not been physically abused, behavioural outcomes were not related to errors in cue interpretation or easy access to aggressive responses to conflict. Rather, aggression and disruptive behaviour were proposed to be related to the adverse impact that maltreatment experiences had had on the ability of these children to regulate their emotions effectively (Teisl & Cicchetti, 2008).

Olson and colleagues' (2011) prospective longitudinal study followed 199 children at risk of conduct problems, from 3 to 6 years of age. In addition to measures of maternal warmth and corporal punishment, task-based measures of child self-regulation variables (negative emotional reactivity, anger/frustration, effortful control), peer

aggression, and theory of mind were administered. At three years of age, regression analyses of child negative emotional reactivity, anger/frustration, and effortful control revealed that effortful control and the interaction between effortful control and anger/frustration remained significant predictors of concurrent peer aggression. Children with a poorer for theory of mind were also more likely to be rated as displaying higher levels of peer aggression. However, this association appeared to be better accounted for by deficits in effortful control. Regression analyses examining maternal warmth and corporal punishment revealed that only corporal punishment remained a significant predictor of concurrent child peer aggression (Olson et al., 2011).

Only child peer aggression at three years of age emerged as a significant predictor of child aggression at six. The researchers inferred this result to indicate that early risk factors contribute to early peer aggression, which then continues throughout childhood. Controlling for child aggression at three, higher levels of maternal corporal punishment, and the interaction between low maternal warm responsiveness and low child theory of mind capacity, were related to higher child aggression at six. Similar to Shields and Cicchetti (2001), child gender did not moderate the relationship between any of the risk factors and concurrent aggression or school-age aggression (Olson et al., 2011).

3.4 Summary

Understanding the way humans deal with affect is of particular relevance to the prevention of emotional and behavioural difficulties. The dynamic processes and strategies underpinning an individual's experience of emotional or affect-related psychological states collectively constitute their capacity for emotion regulation. In turn, the ability to regulate emotion facilitates a number of critical socio-emotional processes. The early development of emotion regulation is almost exclusively a dyadic process, whereby infants require external caregivers to regulate their emotion for them. Over time, children gradually learn to co-regulate their emotion with the caregiver, transitioning to self-regulation. In the absence of early environmental stressors, the more adaptive a caregiver's strategies and reactions, the more successfully this process occurs. The early onset of aggression has been associated with the under-regulation of emotion. Although the constructs of emotion regulation and aggression are often strongly and negatively related, emotion dysregulation does not ensure aggressive behavioural outcomes, and aggressive behaviour is not always attributable to emotion dysregulation. Rather, a range of factors need be considered, consonant with the tenets of cumulative risk models.

CHAPTER 4

PARENTING FACTORS

Sameroff's influential *transactional model* of development (Sameroff & Chandler, 1975; Sameroff, 2010) notes that humans have evolved together with their environments. The early development of each individual is purported to be attributable to the dynamic, ongoing, and interdependent, or bidirectional, relationships between self and environment, and self and other (Sameroff, 2010).

In their important review article, Morris and colleagues (2007) proposed a relatively comprehensive model of the bi-directional impact of parental and familial factors, respectively, on the development of child emotion regulation. Emotion-related parenting practices, parental attitudes toward emotions and relationships, the emotional climate of the family, and child observations of parental socialisation-oriented behaviours were each identified as making a significant contribution (Morris et al., 2007). Each of these factors will be addressed in detail below.

4.1 Adverse Maternal Factors

Empirical research has identified a number of maternal factors that serve as consistent predictors of higher levels of child physical aggression, indirect aggression, and more broadly, externalising behaviours. These maternal factors include disadvantageous social circumstances, psychopathology, and exposure to domestic violence (Cote et al., 2007; Miner & Clarke-Stewart, 2008).

Studies investigating disadvantageous social circumstances have identified low socio-economic status (SES), single parent status, young motherhood, and low level of maternal education as universally, and strongly, associated with inequalities in relation to a family's ability to access social and health-related resources, preventative and curative health services, health education, and healthy, non-hazardous home and work environments (Cote et al., 2007; Li et al., 2009; Miner & Clarke-Stewart, 2008). Further, parents in lower SES families tend to be more likely to smoke cigarettes, consume alcohol, adopt poor dietary and exercise habits, and endorse unhelpful values around the importance and maintenance of health (Li et al., 2009). Indeed, a strong body of evidence points to the relationship between low SES, or residing in a disadvantaged neighbourhood, and later disruptive child behaviour (Burke, Loeber, & Birmaher, 2002).

Maternal psychopathology has also been consistently identified as a factor strongly related to problematic behavioural outcomes in children (Burke et al., 2002). Children born to mothers who identify as anxious or depressed during pregnancy are more likely to experience both cognitive and affective difficulties, possess a difficult or irritable temperament, exhibit behavioural problems, and exhibit hyperactivity (Barker & Maughan, 2009).

Children who grow up in homes where their mother is exposed to domestic violence or partner cruelty are more likely to experience depression, anxiety, withdrawal, lower self-esteem, emotional expression difficulties, emotion dysregulation, and externalising problems including aggression (Katz & Windecker-Nelson, 2006). Maternal avoidance of reminders of traumatic events has also been associated with poorer child adaptation (Cote et al., 2007; Spieker et al., 1999). Less extreme incidences of inter-adult conflict are more widely endorsed by mothers, and have been shown to engender a familial emotional climate weighted toward negativity, while providing children with maladaptive models for conflict resolution and management of negative affect (Morris et al., 2007).

Consistent with these individual areas of investigation, broader longitudinal studies have reported similar patterns of results. Bayer and colleagues' (2008) longitudinal study followed 585 Australian children from 6 months to 3 years of age. The researchers investigated parent-report data of child internalising and externalising behaviours, parent self-report data of harsh discipline, nurturing, developmental expectations, depression, anxiety, stress, and socio-demographic information. Multiple regression analyses revealed that maternal depression, maternal stress, inappropriate developmental expectations of the child, and harsh discipline significantly predicted both child externalising behaviours and child internalising behaviours. Single parent status, parental conflict, and maternal anxiety were identified as additional predictors of child internalising behaviours (Bayer et al., 2008).

Similarly, the *Avon Longitudinal Study of Parents and Children* (Barker & Maughan, 2009) followed a large cohort of English children from 4 to 13 years of age. Maternal anxiety during pregnancy, partner cruelty toward the mother, maternal negative view of the child, harsh parenting, and active child temperament emerged as significant predictors of persistent conduct problem trajectories for both boys and girls (Barker & Maughan, 2009).

Importantly, adverse maternal factors reportedly exert their detrimental impact on child outcomes via non-optimal parenting practices (Burke et al., 2002). Non-optimal parenting practices may incorporate hostile, rejecting, disengaged (e.g., Cote et al., 2007), or dysregulated responses during interactions with children (e.g., Bogat, DeJonghe, Levendosky, Davidson, & von Eye, 2006), frequent and harsh discipline (e.g., Olson et al., 2011), low levels of emotional support and warmth (e.g., Levendosky, Leahy, Bogat, Davidson, & von Eye, 2006), and maltreatment (e.g., Kim & Cicchetti, 2010).

Insensitive parenting has been associated with poorer child adaptation (Cote et al., 2007; Spieker et al., 1999). Punitive punishment has been strongly associated with oppositional, aggressive, hyperactive, and internalising child behaviour (Stormshak, Bierman, McMahon, & Lengua, 2000). Child maltreatment represents the extreme end of the spectrum of non-optimal parenting practices. Families within which maltreatment occurs tend to epitomise the type of maladaptive early social environments that put children at risk for problematic development (Kim & Cicchetti, 2010).

In addition to the exhibition of adverse and distressing parental behaviours, maltreating parents also tend to be less able to provide their distressed child with sensitivity, support, or scaffolding (Kim & Cicchetti, 2010). Maltreated children are often not exposed to opportunities to experience the modulation of their affect away from negative emotional states. In turn, this precludes opportunities to begin internalising these processes, and further exacerbates the developmental risks posed by the unpredictable and frightening environment that characterises maltreating families (Kim & Cicchetti, 2010).

Concordantly, child maltreatment has been identified as one of the most salient and consistent predictors of a broad range of child externalising and internalising problems, including physical aggression, relational aggression, delinquent behaviour, emotional problems, and psychopathology (Alink et al., 2009).

Finally, research has stressed that intimate relationships are largely bi-directional in nature (Morris et al., 2007). Chronic child aggression and non-compliance may provide an ongoing source of stress and frustration for parents and siblings, and may impose a severe disruption to the ability of a family to function harmoniously (Frick & Dickens, 2006). Further, extreme and chronic child externalising behaviours may play a role in provoking harsh parenting practices and parental rejection (Greenwald, 2002).

Indeed, quantitative investigations have revealed a number of common challenges and difficulties encountered by mothers of children who are affected by clinical levels of externalising problems or severe aggression. Relative to parents of non-clinical children, Sawyer and colleagues (2001) reported that parents of children with clinical-level problems perceived adverse effects stemming from their children's emotional and behavioural difficulties on child peer relations, family functioning, and school activities that were significantly pronounced. In addition, the emotional impact and time demands placed on them as parents were rated as being significantly greater (Sawyer et al., 2001).

Similarly, Landy (2011) reported that mothers of clinically referred children tend to report significantly higher levels of parenting stress and depression. In addition, they tend to report significantly lower levels of social support, self-esteem, and limit-setting behaviour with their child (Landy, 2011).

Podolski and Nigg (2001) conducted the first study of parental role distress and coping amongst a sample of parents with a child who had received a diagnosis of ADHD. Child inattention, oppositional behaviour, and aggressive conduct each made significant and unique contributions to parental role distress, in the form of parenting dissatisfaction and parenting performance. Child hyperactivity did not contribute to maternal role distress (Podolski & Nigg, 2001).

Noting the paucity in qualitative research pertaining to the psychological and social implications of parenting a child with a diagnosis of Tourette's Syndrome, de Lange and Olivier (2004) conducted an exploration of seven affected mothers' experiences, with a focus on their children's aggression. Overall, mothers were concerned about the manifestations of their children's aggression, triggers for their aggressiveness, and the welfare of victims of their children's aggression. These mothers raised concerns about their resentful, angry, irritated, guilty, and frustrated feelings, as well as their struggles to accept their child at times. Further, these mothers shared concerns about themselves as parents, feeling unheard and inadequate, and uncertainty pertaining to how best to manage their children's aggression. Finally, these mothers raised concerns about the future. Both their children's future, citing inadequate life skills and social skills, and their own future, citing fears related to their own safety and the unknown (de Lange & Olivier, 2004).

Levac and colleagues' (2008) qualitative exploration of parent perceptions of the effectiveness of a group-based parent training for parents of highly aggressive children revealed that these parents encountered elevated levels of stress and frustration, and feelings of incompetence in the parenting role. The authors proposed that, for this population, parental stress may have disrupted their ability to implement effective parenting practices. The presence of ineffective parenting practices had likely further exacerbated their children's aggression (Levac et al., 2008).

Most recently, Ambikile and Outwater (2012) conducted semi-structured qualitative interviews and focus groups with eight parents of children attending a psychiatric outpatient clinic in Tanzania. The study aimed to explore psychological, emotional, and social challenge faced by these parents (Ambikile & Outwater, 2012). In these families, caregiving responsibilities were usually the role of the mother. Overall, 10 central themes emerged: (1) distressing thoughts about child's behaviour, aggression, future life of the child; (2) emotionally distressing sadness, inner pain, or bitterness; (3) unavoidableness of the situation; (4) inability of their child to communicate needs; (5) inadequate social services or access to education; (6) stigma from other parents or community members; (7) child being mistreated, discriminated against, segregated, or bullied at school; (8) lack of public awareness; (9) lack of social support; (10) disrupted social and love life (Ambikile & Outwater, 2012).

The notion that adverse maternal factors exert their detrimental impact on child outcomes via non-optimal parenting practices suggests that the mechanisms underpinning maternal behaviour require elaboration. The early attachment relationship is perhaps the most appropriate context within which to conduct this investigation, and will be explored in the next section.

4.2 The Early Attachment Relationship

Since its formal conceptualisation in the late 1950's, *attachment theory* has promoted the idea that the early development of a child can be understood only in the context of the child's place within a network of salient relationships (Osofsky, 1995). Expanding upon the observation that children appear predisposed to seek protection and comfort from primary caregivers when distressed, Bowlby (1956) suggested that children require a close and continuous relationship with a caregiver in order to grow up socially, emotionally, and mentally healthy. With its focus on the nature of early relationships in a child's life, attachment theory permits a framework for the

investigation of externalising behaviours as the result of disruptions to healthy social, emotional, and mental development (Guttmann-Steinmetz & Crowell, 2006).

Across the numerous, ongoing interactions between an infant and his or her primary caregiver, the infant develops cognitive and emotional expectations, including a level of 'felt security', pertaining to how available, reliable, and responsively attuned the child expects their caregiver to be when distressed, afraid, or tired (Speltz, DeKlyen, & Greenberg, 1999; Zeanah, Keyes, & Settles, 2003). As discussed in Section 3.2, in order for an infants to develop the ability to self-regulate their affect, arousal, and attentional systems, assistance with regulation via a caregiver is required (Schechter & Willheim, 2009). The quality and consistency of this external regulation strongly influences the extent to which children's self-regulatory capacities will develop. The optimal developmental conditions for adaptive behavioural regulation, affect regulation, and inhibitory capacities are present within a *secure* early attachment relationship (Allen, Fonagy, & Bateman, 2008; Fonagy & Target, 2003; Willemsen et al., 2008).

The concept of *secure* attachment is signified by a young child's internalisation of an available, loving, and protective caregiver (Bowlby, 1988). Secure attachment has been described as "the direct outcome of successful containment, namely the parent's capacity to both reflect the infant's internal state, as well as represent that state for the infant as a manageable experience" (Griesenberger, Kelly, & Slade, 2005, p. 307). From an emotion regulation perspective, a secure attachment relationship can be conceptualised as one in which the child can rely on the caregiver to effectively assist with arousal modulation (Kim & Cicchetti, 2010). The ability to effectively assist the child to return to tolerable emotional states following negative affective experiences, including displeasure, fear, and frustration, is particularly important (Kim & Cicchetti, 2010). Additionally, Bowlby (1969) proposed that caregivers provide an emotional 'safe base' from which children may explore both their internal and external worlds, and return to when distressed or seeking security and comfort (Pearlman, 1998).

During the first year of life, forming a secure attachment relationship and maintaining an inner sense of connection to a caregiver are perhaps the most important developmental tasks for an infant (Alink et al., 2009; Pearlman, 1998). The presence of a primary caregiver who is available, and who provides a reliable source of comfort and protection, establishes the foundation for how successfully the infant will accomplish the development of emotion regulation skills (Alink et al., 2009). In support of this assertion, Gilliom, Shaw, Beck, Schonberg, and Lukon's (2002) longitudinal

study of 189 mothers and their sons reported evidence for a positive association between secure attachment at 1.5 years of age, and child effective regulatory strategy use at 3.5 and then 6 years of age. Similarly, higher maternal control when the child was 1.5 years of age, indicated by a propensity toward warm and accepting parental behaviours during interactions, as opposed to a harsher or more hostile approach, was positively associated with child effective regulatory strategy use at 3.5 and then 6 years of age (Gilliom et al., 2002).

In contrast to secure attachment relationships, *insecure* attachment relationships tend to be characterised by a caregiver with undeveloped affect regulation, behavioural regulation, and attention regulation (Schechter & Willheim, 2009). Together these deficits may lead to the caregiver appearing unavailable, inconsistent, insensitive, or poorly attuned to the child (Speltz et al., 1999). In turn, the security of the attachment relationship may be significantly disrupted, and a low level of felt security may be experienced within the infant (Schechter & Willheim, 2009; Speltz et al., 1999).

Insecure-disorganised attachments are identified in approximately 80% of parent-child relationships where maltreatment has been identified (Borelli, David, Crowley, & Mayes, 2010). First described by Main and Solomon (1990), is characterised by a child who express of a range of “inexplicable, odd, disorganised, disoriented, or overly conflicted behaviors”, only in the presence of a particular caregiver (Borelli et al., 2010, p. 244). These behaviours are understood to be the manifestations of the activation of conflicting behavioural instincts. The distressed child instinctively tries to seek safety from the very attachment figure whose behaviour is the source of the distress (Main & Hesse, 1990). This style of attachment in particular has been identified as a strong predictor of elevated levels of hostile behaviour in pre-schoolers (Lyons-Ruth, Alpern, & Repacholi, 1993), and has been linked to later child emotion dysregulation, externalising behaviours, and dissociation (Schechter & Willheim, 2009; O'Connor, Bureau, McCartney, & Lyons-Ruth, 2011). Further, Borelli and colleagues (2010) reported that disorganised attachment was associated with child depressive symptoms, shyness, social anxiety, inattention, and thought problems in children aged 8-12 years.

Assisting children with the regulation of their developing affective, behavioural, and attentional capacities also presents a challenge for this group of caregivers who are potentially yet to master these processes themselves (Schechter & Willheim, 2009). Noting Hinshaw's (2003) observation that dysregulated affect, dysregulated behaviour, and an underdeveloped inhibitory capacity are consistently reported in children

diagnosed with a disruptive behaviour disorder, a relationship between insecure attachment and later behavioural difficulties has been proposed (Guttmann-Steinmetz & Crowell, 2006).

Speltz and colleagues (1999) outlined five general pathways via which an insecure and disorganised early attachment relationship could lead to behavioural difficulties in children. First, Speltz and colleagues (1999) contend that interactions that are intense, difficult, or emotionally challenging, guide the co-regulation of emotion, provide emotion regulation strategies for the child to internalise (Gottman et al., 1996), and guide the organisation of the infant's neural networks. Insecure patterns of interaction may result in neural networks and conditioned processes that are poorly equipped to tolerate and modulate strong affect, and strong negative affect in particular (Speltz et al., 1999).

Second, given the nature of parental behaviours that are characteristic of insecure and disorganised attachment relationships, disruptive or oppositional child behaviours and emotional patterns may be adaptive within the context of the caregiver-child relationship (Speltz et al., 1999). Indeed, such behaviours or emotional patterns may be employed as strategies to engage an unavailable or unresponsive parent, or to attempt to regulate the proximity and predictability of an emotionally disorganised parent (Speltz et al., 1999). Maughan and Cicchetti (2002) reported that approximately 80% of maltreated children investigated in their study were rated as displaying either under-controlled or over-controlled patterns of emotion regulation. This finding prompted the authors to suggest that maltreatment exerted its influence on child outcomes via the encouragement of emotion regulation patterns that were adaptive within the non-optimal family context, but maladaptive in contexts outside the familial environment (Maughan & Cicchetti, 2002).

Third, the internal working models of attachment relationships held by caregivers strongly guide parenting behaviours, as well as the ability to respond to negative child behaviours and affect (Speltz et al., 1999). In insecure and disorganised attachment relationships, the internal working models held by caregivers are more likely to contain distorted perceptions and expectations pertaining to child behaviour and affect. In addition, these working models potentially reduce the caregiver's ability to understand, attune with, tolerate, or regulate negative child behaviours and affect (Speltz et al., 1999). Ongoing exposure to the type of atypical maternal behaviours that underpin insecure or disorganised attachment may result in the caregiver's maladaptive internal working models being indirectly transmitted to the infant, who may internalise

expectations of others as unreliable, unable to meet their expectations, and unattuned to their needs (Speltz et al., 1999). This process is more likely if the child's primary experience of an intimate, ongoing relationship is insecure or disorganised in nature (Speltz et al., 1999).

Fourth, caregivers may encourage the child to create negative internal working models of relationships (Speltz et al., 1999). Consequently, as the child's social world broadens, future intimate and social relationships, as well as those with authority figures, may be filtered through a set of distorted perceptions, expectations, and mental representations, including biases toward attributing the behaviour of others to hostile motives (Alink et al., 2009). Indeed, an insecure and/or disorganised pattern of early attachment with a significant caregiver has been identified as a risk factor for later problems with social relationships and the possession of hostile attribution biases (Guttmann-Steinmetz & Crowell, 2006).

Fifth, children who have experienced an insecure attachment relationship will likely have struggled to identify with their caregiver. This may translate to the child struggling to identify with other significant people subsequently encountered, rendering empathic and compliant behaviour less likely (Speltz et al., 1999).

Taken together, it is evident that early attachment relationships continue to exert an influence over children's emotional and social development beyond the first few years of life (Alink et al., 2009). Importantly, once children reach middle-childhood, the crucial aspects of interactions implicated in the continuing development of emotion regulation and coping shift. The largely uni-directional influence of the parent over the child, gives way to a more bi-directional relationship, where open communication, responsiveness, and availability, particularly in response to child requests for assistance are key (Alink et al., 2009).

Parental capacity for *reflective functioning* and parental *emotional styles* are two prominent constructs that have their roots in attachment theory, and have been related to attachment security across the lifespan. Each of these constructs is explored in the following sections.

4.3 Parental Capacity for Reflective Functioning

Extending Bowlby's (1969) theory of attachment, *mentalisation* is a concept born out of developmental theory that, in concert with recent research, depicts how the psychological 'self' develops within the context of early relationships (Fonagy, 1996; Fonagy et al., 2002). Mentalisation focuses on an awareness of *mental states*, which are defined as the cognitive and emotional processes that operate either consciously or non-consciously within an individual. These can include intentions, affects, ideas, thoughts, beliefs, and desires (Slade, 2005). The ability to concurrently hold in mind both one's own mental states and the mental states of others, and use an awareness of these to interpret behaviour, is referred to as *mentalising* (Fonagy et al., 2002; Slade, 2005). A high capacity for mentalisation is evident in the capacity to accurately perceive, tolerate, organise, reflect upon, and discuss mental states belonging to the self and other. A high capacity is particularly evident in the ability to negotiate mental states that are ambivalent or painful without minimising, distorting, or dissociating (Grienenberger et al., 2005; Rosenblum, McDonough, Sameroff, & Muzik, 2008; Slade et al., 2005). *Reflective Functioning* (RF) is the term used to operationalise an individual's capacity for mentalisation (Fonagy, 1996; Fonagy et al., 2002).

RF provides a theoretical foundation for understanding individual differences in the regulation and modulation of experience, particularly in the face of situations high in emotional intensity or interpersonal stress (Slade, Grienenberger, Bernbach, Levy, & Locker, 2005). As such, parental RF capacity has been adopted by dynamically-oriented clinicians as a paradigm through which both the development and interpersonal function of a range of adverse child behaviours may be better understood (Slade, 2005).

An infant's awareness of mental states cannot be developed via introspection (Fonagy & Target, 2003). Rather, infants require a caregiver who can understand their negative affect in terms of underlying and transient mental states that relate to the need for comfort, safety, and proximity. Simultaneously, the caregiver should remain engaged with her infant, maintain control over the situation, and effectively communicate her understanding behaviourally via the representation and containment of the infant's mental states, as well as provide a feeling of safety and comfort (Grienenberger et al., 2005; Slade et al., 2005). In turn, representation and containment function as external regulators of the child's internal experience, and provide the optimal conditions for the fostering of a secure attachment (Slade et al., 2005). Caregivers with a higher level of RF may be better equipped to meet these needs. Indeed, amongst mothers, high RF capacity has been identified as an important buffer against severe disruptions to affect

regulation in the face of infant distress, and facilitative of the consistent provision of containing, integrated responses (Grienemberger et al., 2005).

Concordantly, in their investigation of attachment across generations, Slade and colleagues (2005) reported that, after controlling for maternal RF, the strong relationship between the nature of a mothers' attachment relationship with her own parents and the nature of the attachment relationship with her infant, was reduced to non-significance. The authors concluded that maternal RF played a critical role in the transmission of attachment across generations (Slade et al., 2005).

The better equipped a mother is to think and feel about her relationship with her child in a regulated and balanced way has been observed to influence her style of parenting (Slade, Belsky, Aber, & Phelps, 1999). Indeed, positive parenting attitudes and positive parenting behaviours may be reciprocal (Barker & Maughan, 2009).

Rosenblum and colleagues' (2008) investigation of a community sample of 95 mother-infant dyads revealed that maternal RF shared significant positive associations with level of maternal education, sensitive parenting, and the use of *mind-minded* comments, demonstrating an awareness of mental states. Maternal RF also shared significant negative associations with rejecting/angry parenting, intrusive behaviour, and maternal anxiety (Rosenblum et al., 2008). In regression analyses, maternal RF accounted for a significant proportion of the variance in maternal intrusiveness and mind-minded comments, after controlling for maternal depression and education. The authors concluded that maternal RF was a relatively global capacity that may have an impact on children via its influence on mothers' use of mind-minded comments, intrusiveness, and sensitive or rejecting/angry parenting (Rosenblum et al., 2008).

Finally, underlying difficulties with mentalising may shed some light on how some mothers come to unconsciously adopt a hostile parenting style (Aber, Belsky, Slade, & Crnic, 1999; Grienemberger et al., 2005; Slade et al., 1999; Slade et al., 2005).

Mothers with a low capacity for mentalising may understand their infant's distress through the distorting filter of their own previous experiences and current projections, due to a reduced ability to distinguish between their own feelings and those belonging to the infant (Grienemberger et al., 2005). In turn, the mother's response to her infant's vulnerability and distress may be dysregulated and disorganised. It may be coloured by negative elements, such as hostile, insensitive and intrusive behaviours, or fearful and withdrawn behaviours. Response patterns of this nature present an avenue for

disruptions to the security of the attachment relationship, and undermine children's development of adaptive self-regulating capacities and mentalising ability. Further, this process perpetuates an intergenerational pattern of attenuated mentalisation (Allen et al., 2008; Fonagy & Target, 2003; Grienemberger et al., 2005).

In contrast, the environmental conditions characteristically associated with secure attachment permit infants to begin to gain control over, and an understanding of, their internal experiences. In turn, these processes begin to lead to self-regulation, and the ability to mentalise (Grienemberger et al., 2005; Slade, 2005). More specifically, a number of pioneering studies have reported that the development of the innate ability to mentalise during childhood is associated with the RF capacity of the child's primary attachment figure, usually the mother (e.g., Aber et al., 1999; Grienemberger et al., 2005; Slade et al., 1999; Slade et al., 2005).

Children's understanding of themselves changes rapidly across the early years of life, as they learn that subjective experiences are separate to physical behaviours and contexts (Olson et al., 2011). The ability to understand one's own self, in conjunction with the capacity to understand the mental states of others, is proposed to mediate the ability to both interpret and predict the actions and feelings of self and others (Slade, 2005), as well as the ability to effectively communicate mental states to others (Fonagy et al., 2002; Grienemberger et al., 2005). Together these abilities permit children to successfully partake in collaborative, reciprocal, and intimate social relationships (Slade, 2005).

In contrast, an underdeveloped capacity for mentalisation in children has been proposed as a risk factor for the emotional, behavioural, and impulse dysregulation observed in externalising behaviours (Allen et al., 2008). Further, a delay in the development of *theory of mind*, or social cognitive understanding, is one of the factors associated with childhood aggression raised by Lemerise and Arsenio (2000). Child performance on theory of mind tasks and attachment security, respectively, are strongly associated with the mentalising ability of the child's primary caregiver (Grienemberger et al., 2005; Rosenblum et al., 2008; Slade, 2005).

Slade and colleagues (2005) followed a community sample of mothers recruited during pregnancy, monitoring maternal RF and child attachment over time. Mothers later categorised as having either an insecure-resistant or insecure-disorganised attachment with their infant were rated as having the lowest levels of RF. Mothers categorised as

having either an insecure-avoidant or secure attachment with their infant, were rated as having the highest levels of RF. Noting that an avoidant relational strategy may represent an adaptive or productive approach for children to adopt in order to have their needs met in certain contexts, the authors concluded that maternal RF may best be viewed as a capacity that is critical for averting the potential development of potentially adverse attachment styles and, in turn, the sequelae of these early relationship types (Slade et al., 2005).

Finally, in one of the few empirical studies investigating maternal RF in a non-infant or toddler sample, Benbassat and Priel (2012) investigated the relationship between parental RF and adolescent social adjustment. In addition to administering parent self-report measures of parenting involvement, warmth, and control, the researchers conducted the *Parent Development Interview* (PDI; Aber, Slade, Berger, Bresgi, & Kaplan, 1985) with the mothers and fathers of 105 adolescents aged 14 to 18. Adolescent self-report measures of RF, social competence, self-perception, internalising problems, and externalising problems were also administered. With regard to the direct influence of parental RF on adolescent outcomes, parental RF correlated positively and strongly with both adolescent RF and adolescent social competence. In addition, parental RF moderated the relationships between specific parenting behaviours and adolescent outcomes. In particular, parental warmth was positively associated with adolescent social self-perception in families with high levels of parental RF. Parental control was negatively associated with adolescent self-perception and social competence, and positively associated with adolescent externalising problems in families with low levels of parental RF (Benbassat & Priel, 2012).

Benbassat and Priel's (2012) study deviated from the majority of related studies with its use of adolescent self-report measures. Against expectations, the authors noted that parental RF also positively correlated with adolescent internalising symptoms, and negatively correlated with positive self-perception (Benbassat & Priel, 2012).

Taken together, secure attachment, a well-developed ability to self-regulate, and a well-developed capacity for mentalising appear to act as protective factors against adverse consequences in response to potential environmental stressors or traumas encountered by children (Allen et al., 2008; Fonagy & Target, 2003). Conversely, low parental capacity for mentalisation has been identified as a factor that potentially disrupts the security of the early attachment relationship, and renders children more

vulnerable to the adverse effects of environmental stressors (Allen et al., 2008; Slade et al., 2005). These findings provide the rationale for the use of this construct in an investigation of the factors underpinning child externalising behaviours. To further elucidate the mechanism underpinning the relationship between maternal RF and adverse child outcomes, we turn to the related concept of maternal emotional styles.

4.4 Parental Emotional Styles

A strong body of literature examining and categorising parent behaviours pertaining to the socialisation of child emotion exists (Morris et al., 2007). Encouragingly, the broad consensus to emerge from this literature is consistent with the findings of the emotion regulation, attachment, and RF literature. Specifically, the level of positive emotional expressivity, emotion-related discourse, and acceptance of emotion within a family influence the development of children's emotional understanding, emotional competence (Morris et al., 2007), and feelings of being understood (Rosenblum et al., 2008). They also appear to be related to children's ability understand their own mind and actions, and the minds and actions of others (Slade, 2005).

Parental meta-emotion philosophy was pioneered by Gottman and colleagues (Gottman et al., 1996). Parental meta-emotion philosophy employs a theoretical premise heavily couched in attachment theory. Accordingly, parental meta-emotion philosophy proposes that the environment most conducive to healthy child emotional development will feature a caregiver who acknowledges that children are psychological agents, and who has the ability to reflect on both their own mental states and those of the child, particularly during heightened emotional encounters (Gottman et al., 1996; Sharp & Fonagy, 2008). A parent's meta-emotion philosophy can be conceptualised as the organised set of beliefs and feelings around affect that they possess, which underlies their child *emotion socialisation* behaviour (Morris et al., 2007).

Within the parental meta-emotion philosophy paradigm, emotion socialisation is conceptualised as the caregiver's propensity to actively use internalised knowledge of emotions to coach their child with regard to employing healthy strategies for the regulation of emotion (Lagace-Seguin & Coplan, 2005; Sharp & Fonagy, 2008). Similar to accounts within the emotion regulation and RF literature, a parent's approach to emotion socialisation appears to be of particular importance in situations where a child is experiencing negative emotions such as sadness, anger, or fear (Lagace-Seguin & Coplan, 2005). Lagace-Seguin and Coplan (2005) identified two prominent and

contrasting approaches to emotion socialisation, referred to as *parental emotional styles*, namely, *emotion coaching* and *emotion dismissing*.

An emotion coaching parenting style is primarily characterised by an attuned awareness to, and validation of, the caregiver's own emotions, in addition to their child's emotions (Gottman & de Claire, 1997; Gottman et al., 1996). An emotion coaching style incorporates an openness in discussing both the caregiver's own emotions and their child's emotions (Lagace-Seguin & Coplan, 2005). Parents who adopt this style endorse the perspective that their child's experiences of both positive and negative emotions, respectively, present important opportunities for intimacy or teaching. This may include the provision of assistance to their child with emotion labelling, limit-setting with respect to behavioural displays of emotion, or constructive problem-solving (Gottman & de Claire, 1997; Gottman et al., 1996; Lagace-Seguin & Coplan, 2005).

Contrasting with the emotion coaching approach to emotion socialisation, an emotion dismissing parenting style is primarily characterised by a low level of awareness of the caregiver's own emotions, as well as those of their child (Gottman & de Claire, 1997; Gottman et al., 1996). Negative affect is characteristically perceived either as overwhelming, an indicator of poor parenting, or a toxic threat to the child's emotional well-being. Consequently, negative affect tends to be ignored, dismissed, or, in some cases, punished by parents who adopt this style (Lagace-Seguin & Coplan, 2005; Lunkenheimer et al., 2007).

It is important to note, however, that most parents will employ either or both of these styles of parenting across a range of contexts and interactions, rather than strictly adhering to one or the other. However, a tendency toward one style will usually emerge (Lunkenheimer et al. 2007).

Gottman and colleagues (1996) proposed a seminal model for the influence of parent meta-emotion on child outcomes, via its effect on parenting behaviours and child regulation. Subsequently, several studies have empirically tested the proposed relationship between parental emotional style and child outcomes.

Gottman and colleagues (Gottman & Katz, 1989; Gottman et al., 1996; Hooven, Gottman, & Katz, 1995; Katz & Gottman, 1993) surveyed 56 families and associated teachers. Children were approximately 5 years of age at Time 1, and approximately 8

years of age at Time 2. Parental dyads varied widely with regard to marital satisfaction awareness of their own emotions, and approaches to emotion socialisation. At Time 1, children whose parents engaged in higher levels of emotion coaching at Time 1 exhibited lower levels of physiological stress, higher regulation physiology, and a greater ability to inhibit impulsive responses to extraneous stimuli and focus attention. At Time 2, these children exhibited higher emotion regulation, fewer behaviour problems, had encountered fewer physical illnesses, and achieved higher academic success with respect to mathematics and reading (Gottman et al., 1996; Hooven et al., 1995). Further, child emotional regulation at Time 2 was positively related to concurrent child peer relations and teacher-rated social competence.

In addition, higher levels of parental emotion coaching were directly associated with parental provision of scaffolding and praise for their child, and the inhibition of derogating their child (Gottman et al., 1996). Child outcomes in the form of academic achievement and peer relations were higher amongst these children of high emotion coaching parents. Associations between parental emotion coaching and child outcomes were not better accounted for by SES, emotional expressiveness, or the happiness and stability of the parental relationship (Hooven et al., 1995).

The positive association between parental emotion coaching and child regulatory physiology provides evidence for the proposal that parental coaching of negative child affect has a soothing effect on children that may modify salient aspects of the developing parasympathetic nervous system (Gottman et al., 1996). In turn, this may facilitate the development of the ability to self-soothe, regulate negative emotion, and focus attention (Gottman et al., 1996). The authors noted the small sample size as a possible barrier to broader generalisation.

Ramsden and Hubbard (2002) investigated a community sample of 120 children, aged 9 to 10 years, and their mothers. Maternal-reports of positive family expressiveness, negative family expressiveness, maternal emotion coaching, and child emotion regulation were collected in addition to teacher ratings of child emotion regulation and aggression. In this study, maternal emotion coaching was assessed according to three sub-components, namely maternal awareness of her child's anger and sadness, maternal acceptance of her child's anger and sadness, and maternal instruction to her child with regard to managing experiences of anger and sadness. Noting the significant correlation between maternal and teacher ratings of child emotion regulation ($r = .24, p < .01$), the authors combined these variables to produce a single emotion regulation variable. Similarly, noting the significant correlation between teacher-rated

child reactive aggression (3 items) and proactive aggression (3 items) sub-scale scores ($r = .82, p < .01$), the authors combined these variables to produce a single child aggression variable (Ramsden & Hubbard, 2002).

Analyses revealed that each of the three sub-components of maternal emotion coaching, as well as positive family expressiveness and negative family expressiveness, respectively, were too distal to directly impact on child aggression (Ramsden & Hubbard, 2002). However, consonant with a number of related studies (e.g., Cole et al., 1996; Gottman & Katz, 1989; Gottman et al., 1996; Hooven et al., 1995; Katz & Gottman, 1993; Shields & Cicchetti, 2001; Teisl & Cicchetti, 2008), negative family expressiveness and maternal acceptance of child negative emotion, respectively, indirectly influenced child aggression via their direct impact on child emotion regulation. Specifically, higher negative family emotion expression and lower maternal acceptance of child emotion, respectively, were associated with reduced emotion regulation in children which, in turn, was associated with elevated levels of child aggression (Ramsden & Hubbard, 2002). The authors noted that, for this sample, neither positive family expressiveness, maternal emotion awareness, nor maternal emotion acceptance was related to emotion regulation (Ramsden & Hubbard, 2002).

Shipman and colleagues (2007) investigated maternal emotion socialisation and child emotional regulation in 40 maltreating and 40 non-maltreating mother-child dyads. Amongst children aged 6 to 12 years, maltreating mothers reported lower levels of emotion coaching parenting, relative to non-maltreating mothers. Child maltreated status also predicted lower levels of *adaptive emotional regulation*, defined by coping and self-soothing strategies, and higher levels of *emotional dysregulation*, defined by affect lability and negativity (Shipman et al., 2007).

In one of two known studies to investigate parental emotion styles in families with a child who had been diagnosed with a clinical behavioural disorder, Katz and Windecker-Nelson (2004) recruited 32 families with a child who met diagnostic criteria for ODD or CD, and 65 matched control families. All children were aged 4 to 6 years. Parent-report measures were administered to mothers. In comparison to their peers, children with a clinical diagnosis tended to exhibit higher levels of aggression, and experienced greater difficulty engaging in quality peer interactions. Mothers of children with a behaviour disorder tended to be less aware of their own emotions, and tended to engage in less emotion coaching behaviour. For both groups, higher levels of maternal emotional awareness and maternal emotion coaching, respectively, were positively

related to incidences of positive child peer play. Similarly, higher levels of maternal emotional awareness and maternal emotion coaching, respectively, were negatively related to incidences of negative child peer play for both groups of children. However, the authors noted that these effects were stronger in control families (Katz & Windecker-Nelson, 2004).

In the second known study, Dunsmore and colleagues (2013) recruited 72 mother-child dyads. Children were aged 7 to 14 years, and had received a diagnosis of ODD. The mothers held beliefs about their child's emotions that, on average, did not deviate from those of mothers of typically developing children. However, the mothers included in the study tended to engage in a greater level of encouragement with respect to their child's negative emotions (Dunsmore et al. 2013). Dunsmore and colleagues (2013) reported that higher levels of maternal emotion coaching were positively related to child emotion regulation, and negatively related to child self-reports of disruptive behaviour. In turn, child emotion regulation was related to higher maternal-ratings of child adaptive skills. Similar to Benbassat and Priel's (2012) finding, child emotion regulation was positively related to child-reported internalising symptoms.

Emotion lability/negativity was directly and positively related to both child externalising and internalising symptoms, and negatively related to child adaptive skills (Dunsmore et al., 2013). Further, child emotion lability/negativity moderated the indirect relationship between maternal emotion coaching behaviour and child externalising behaviour. Specifically, amongst children with a high level of lability/negativity, a negative association between maternal emotion coaching and both child externalising and internalising symptoms emerged. However, amongst children with a low level of lability/negativity, no association between maternal emotion coaching and child self-reported externalising symptoms emerged, and a positive association between maternal emotion coaching and maternal-reports of child externalising symptoms emerged (Dunsmore et al., 2013). The authors concluded that, in children who exhibit lability in emotional responsiveness and a propensity toward negative affect, maternal emotion coaching acted as a protective factor against the development of externalising behaviour (Dunsmore et al., 2013).

Together, these studies provide an empirical basis for the assertion that emotion coaching and emotion dismissing parenting styles exert significant influences on the development of children's emotion regulation skills, and that emotion regulation is, in turn, associated with child behavioural outcomes.

4.5 Summary

The overall, daily emotional climate of a family, including the nature of the parent-child attachment relationships, parenting styles, and the prevalence of both positive and negative intra-familial affective expressions, dynamics, and processes, constitutes a significant proportion of the infant's early environment. These familial factors interact with the child's predisposed characteristics to shape the developmental trajectory the child is likely to follow.

Adverse maternal factors appear to exert their detrimental impact on child outcomes via non-optimal parenting practices. However, parent-child relationships are reciprocal, and chronic child aggression and non-compliance may provide an ongoing source of stress and frustration for parents and siblings, and may impose a severe disruption to the ability of a family to function harmoniously. Outside of the strong body of quantitative literature, there exists a paucity of qualitative research pertaining to the psychological and social implications of parenting a child with a diagnosis of clinical levels of behavioural disorders.

Secure attachment, a well-developed ability to self-regulate, and a well-developed capacity for mentalising have been found to act as protective factors against adverse consequences in response to potential environmental stressors or traumas encountered by children. On the other hand, children with an underdeveloped capacity for mentalisation are at risk of the emotional, behavioural, and impulse dysregulation observed in externalising behaviours. Poor parental capacity for mentalisation has been identified as a factor that potentially disrupts the security of the early attachment relationship, and renders children more vulnerable to the adverse effects of environmental stressors.

In community samples, familial negative expressiveness and emotion coaching indirectly affect levels of child aggression via their impact on child emotion regulation. In families with a child who had been diagnosed with a clinical behavioural disorder, mothers tend to be less aware of their own emotions and tend to engage in less emotion coaching behaviour. In children with clinical behavioural problems, emotion lability/negativity may moderate the indirect relationship between maternal emotion coaching behaviour and problematic behaviour.

CHAPTER 5

EARLY TRAUMA AND LOSS

Over two decades ago, Terr (1991) warned that trauma is so ubiquitous that it is often at risk of being ignored in research and clinical practice. Following Terr's (1991) position, the critical role that early trauma plays in child clinical symptom presentation will be acknowledged within the context of the relationship between early trauma exposure and later child behavioural difficulties.

5.1 Definition and Prevalence of Child Trauma

Trauma can be defined as experiencing or witnessing an occurrence, or series of occurrences that present the potential for death, serious injury, or harm, to self or others (APA, 2013). The individual may experience "intense horror, fear, or pain, along with helplessness" (Greenwald, 2002, p. 6). The occurrence(s) may include physical or sexual maltreatment, violent personal attacks, being kidnapped or taken from the family, witnessing domestic or community violence, severe illnesses or accidents involving the self or others, the loss of friends or family members through death or divorce, or encountering a natural or manmade disaster (APA, 2013; Ford et al., 2000; Taylor, Weems, Costa, & Carrion, 2009).

In addition, the *complex trauma* construct, which proposes to capture the sequelae of qualitatively severe and repeated trauma that is interpersonal in nature and begins in childhood, is gathering empirical and clinical support in the recent literature (Wamser-Nanney & Vandenberg, 2013). In families, complex trauma primarily pertains to repeated intimate or domestic abuse, including child sexual, physical, and emotional abuse, neglect, or witnessing domestic violence (Wamser-Nanney & Vandenberg, 2013).

Prevalence estimates of exposure to trauma and loss in community samples suggest that trauma is normative (Ford et al., 2000). Before they reach adulthood, approximately half of all children will encounter at least one traumatic event (Ford et al., 2000). Finkelhor, Ormrod, and Turner (2007) reported that 22% of children had experienced four or more types of victimisation in the previous year, indicating that exposure to repeated trauma is also relatively common. In clinical samples of anti-social youths, prevalence estimates of exposures to traumatic events rise to between 70% and 92% (Greenwald, 2002). Connor and colleagues' (2004) investigation of a

sample of clinically referred youths, ranging 5 to 18 years of age, found that 47% reported having experienced physical or sexual abuse, 59% resided in families where one or both parents had histories of alcohol or substance abuse, 59% had witnessed parental violence, and 36% had a parent who had been arrested for criminal activity.

5.2 The Effects of Early Trauma

The first few years of life represent a unique period in the lifespan. The brain is constantly and rapidly developing, growing, and changing (Anda et al., 2006). Importantly, the brain is also particularly receptive and vulnerable to environmental context during this period (Anda et al., 2006). With regard to exposure to complex trauma, children's psychological and physical immaturity, and inability to escape their maltreating environment, renders them particularly vulnerable to the consequences of ongoing abuse perpetrated by family members who are also relied upon for safety and protection (Courtois, 2004).

Relative to their peers, children exposed to multiple traumas are more likely to exhibit intrusive dreams or flashbacks, hyper-arousal, externalising behaviours, internalising behaviours, and emotional dysregulation (Evans, Davies, & DiLillo, 2008; Ford et al., 2000; Greenwald & Rubin, 1999; Maughan & Cicchetti, 2002; Shipman, Schneider, Fitzgerald, Sims, Swisher, & Edwards, 2007). Symptoms of complex trauma can include emotional and behavioural dysregulation, impulsive behaviour, attention problems, disrupted consciousness, and interpersonal difficulties (Wamser-Nanney & Vandenberg, 2013). The earlier and more protracted the exposure, the more likely a child's developmental trajectory will be significantly and adversely impacted (Mongillo, Briggs-Gowan, Ford, & Carter, 2009; Wamser-Nanney & Vandenberg, 2013). Interpersonal traumas, such as maltreatment or abuse, tend to escalate across time and are associated with more severe and persistent symptoms (APA, 2013; Courtois, 2004; Wamser-Nanney & Vandenberg, 2013).

In children, responses to trauma tend to vary widely with respect to the nature of the symptoms, their severity, and their onset (Greenwald, 2002). In children, symptoms usually manifest within 3 months after the initial exposure, however, symptom onset may not occur for up to 10 years, particularly for individuals who endured physical or sexual abuse (APA, 2000; Ford et al., 2000). Indeed, a discrete benign exposure, or series of benign exposures, may render children more vulnerable to symptomatic outcomes in the event of additional stressors encountered in the future (Greenwald,

2002). Most symptoms begin to desist within a year after exposure, although precipitated affective and behavioural difficulties may persist into adolescence and adulthood (Ford et al., 2000).

A wealth of prospective, retrospective, and cross-sectional studies of infants, children, and adolescents, sampled from both community and clinical populations have reported the relationship between trauma exposure and child externalising behaviour, especially aggression.

Mongillo and colleagues' (2009) investigation of toddlers revealed that 20% of infants who had been exposed to traumatic events were reported to exhibit a dramatic change in functioning. Relative to their non-exposed and non-changed peers, mothers of the subgroup of affected infants reported that their child exhibited higher levels of externalising behaviour, affect dysregulation, and maladaptive behaviour (Mongillo et al., 2009). Similarly, amongst a sample of 6 to 12 year-olds, Gustafsson, Larsson, Nelson, and Gustafsson (2009) found that a history of traumatic life events, and interpersonal traumas in particular, were associated with externalising symptoms. These findings remained significant even after controlling for gender, age, and comorbid symptoms (Gustafsson et al., 2009).

Links between early trauma exposure and later child aggression are significantly apparent within referred populations (Connor et al., 2004). Studies of this population have reported that histories of maladaptive and violent experiences that included physical or sexual abuse, parental alcohol or substance abuse, or parental violence or criminality, are significantly related to elevated levels of child hostility, hyperactive and impulsive behaviour, reactive and proactive aggression, and hostile attribution biases (Connor et al., 2004). Further, children exposed to complex trauma from an early age reportedly exhibit significantly higher levels of generalised behaviour problems and trauma-related symptoms than children who encounter acute non-interpersonal trauma, acute interpersonal trauma, or chronic interpersonal trauma that had begun in adolescence (Wamser-Nanney & Vandenberg, 2013).

Finally, Anda and colleagues (2006) undertook an epidemiological investigation of 17,337 adults to assess the associations between a set of 8 adverse childhood experiences and the relative risk of later outcomes. Across the sample, adults retrospectively reported experiences of physical abuse (28%), familial alcohol/substance abuse (27%), separation/divorce (23%), sexual abuse (21%),

parental mental illness (19%), domestic violence toward mother (13%), emotional abuse (11%), and familial criminality (5%). Logistic regression analyses revealed that the relative risk for all measured adverse outcomes increased significantly as the number of adverse childhood experiences increased, suggesting a cumulative effect of exposure to early stressors (Anda et al., 2006).

Together, these studies provide empirical support for the association between early trauma exposure and later child externalising behaviour and aggression. The mechanisms underpinning this association, however, require further exploration. These are addressed in the next section.

5.2.1 Pathways from trauma exposure to behavioural outcomes.

Pathways from trauma exposure to observable outcomes are disparate, dynamic, interrelated, and complex. Stressful and traumatic experiences activate the body's *stress response* system (Landy, 2011). Without modulation by a securely attached primary caregiver, patterns of abnormally intense, frequent, or prolonged activation of this system may occur. Chronic activation of the stress response system may disrupt the optimal neurological development of a wide range of brain circuits and systems, leading to changes in brain structure and functional deficits (Anda et al., 2006; Landy, 2011).

Indeed, the disruptive impact of traumatic experiences on the development of the neurophysiological architecture, neural circuitry, and functional capacity of the young brain underpins a number of sequelae, including cognitive, language, learning, and social deficits, increased risk of psychopathology, and lower quality of life (Greenwald, 2002; Landy, 2011; Weems & Pina, 2010; Zerk, Mertin, & Proeve, 2009).

Underpinning many of these outcomes, traumatic experiences are understood to disrupt a number of brain regions implicated in monitoring the environment for threats, and responding to identified threats (Connor et al., 2004). In the face of chronic exposure to threat, contextually-adaptive, fear-related neurophysiological pathways may develop, with a significantly reduced threshold for activation (Connor et al., 2004). These pathways, in turn, influence the emotional, behavioural, and cognitive functioning of children, with consequences such as the elevated likelihood of impulsive or reactive aggression emerging as most salient (Connor et al., 2004).

At the cognitive level, traumatic experiences are often overwhelming, and difficult for the memory processing systems to integrate into coherent experiences (Greenwald, 2002). Unintegrated memories may intrude into children's thoughts, feelings, and visual memory, leading to emotional reactivity, affect dysregulation, and violent acting out (Greenwald, 2002).

At the level of social information processing, traumatic experiences, particularly those that are interpersonal in nature, can violate a child's basic sense of safety, trust, and their belief that the world is a safe place (Greenwald, 2002). Paralleling the neurological literature pointing to the development of fear-related neurophysiological pathways with significantly reduced thresholds for activation (e.g., Connor et al., 2004), children who view the world as unsafe may learn to remain in a state of chronic hypersensitivity in an attempt to detect real or perceived environmental threats. During social interactions, these children are more likely to adopt a defensive and reactive position, primed to respond with avoidance, social withdrawal, or aggression (Greenwald, 2002). A defensive and reactive social information processing style permits associations to be drawn between children who have encountered trauma and externalising children, who exhibit reactive aggression, hostile attribution biases, and reduced social competence.

Traumatic experiences have also been reported to reduce children's sense of future (Greenwald, 2002). In turn, a reduced sense of future has been associated with impulsivity, instant gratification, and reduced regard for delayed consequences (Greenwald, 2002). This finding permits further associations to be drawn between children who have encountered trauma and externalising children.

At the level of affect, exposure to trauma can engender feelings of intolerable and chronic fear or sadness, rage, shame, hopelessness, and being under constant threat (APA, 2000; Terr, 1991). Children exposed to chronic or repeated traumas, that are usually interpersonal in nature, are more likely to subconsciously employ psychic defences such as denial, repression, dissociation, and identification with the aggressor, in an attempt to preserve the self (Terr, 1991). Attempts to rid the self of associated intense and unpleasant feelings may promote incidences of substance abuse, self-harming behaviours or suicide, violent acting-out, habitual patterns of aggression, an absence of affect, or extreme passivity (Greenwald, 2002; Terr, 1991).

At the personality level, the pervasive and neurologically reinforced nature of traumatic symptoms may lead children to organise their developing sense of identity around maladaptive symptom clusters, further perpetuating their salience and influence (Greenwald, 2002). In particular, Terr (1991) purports that ongoing, interpersonal traumas lead to a stronger association with disturbances of personality, relative to traumatic encounters that are acute or non-interpersonal in nature.

Perhaps most importantly, at the biological level, chronic activation of the stress response system is proposed to disrupt the ability to regulate emotion, which has been implicated in many of the pathways addressed above (Carrion, Weems, & Reiss, 2007; de Bellis, 2001; Kim & Cicchetti, 2010; Weems & Carrion, 2007). The key role of emotion regulation is further elaborated in the next section.

5.2.1.1 Child trauma exposure and emotion regulation.

The attachment and parenting literature posit that risk factors within these domains disrupt child emotion regulation, which, in turn, affects child outcomes. Consonant with this proposition, one of the mechanisms underpinning the association between trauma exposure and adverse child outcomes appears to be the disruptive effect of trauma on emotion regulation.

Maughan and Cicchetti (2002) conducted a correlational study with a sample of low-SES maltreating and non-maltreating families, that included 139 children aged 4 to 6 years and their mothers. Approximately 80% of the maltreated child group, who had been exposed to physical abuse or neglect, evidenced a dysregulated emotional pattern (50% under-controlled, 29.5% over-controlled). In contrast, only approximately 37% of the non-maltreated child group evidenced a dysregulated emotional pattern (23.5% under-controlled, 13.7% over-controlled). Across emotion regulation groups, children with 'under-controlled' emotion were reported to exhibit significantly higher levels of anxious/depressed behaviour. Children with 'under-controlled' emotion were reported to exhibit significantly higher levels of social problems (Maughan & Cicchetti, 2002). Possibly as a consequence of the conceptualisation of emotion regulation employed in this study, this construct was not directly associated with child withdrawn/depressed, delinquent, or aggressive behaviours (Maughan & Cicchetti, 2002). This study did not assess the role of maternal parenting factors, or the presence of child PTS symptomatology.

Shipman and colleagues (2007) investigated a sample of 40 physically maltreated children, aged 6 to 12 years, and their mothers, and a comparison group of 40 non-maltreated children and their mothers. On average, maltreated children were rated by mothers as displaying lower levels of adaptive emotion regulation and higher levels of emotion dysregulation, compared with children who were not maltreated.

In response to displays or disclosures of child anger, sadness, and fear, maltreating mothers tended to provide fewer incidences of validation and emotion coaching, and more incidences of maladaptive emotion socialisation (Shipman et al., 2007).

Extending Maughan and Cicchetti (2002), Shipman and colleagues (2007) claimed that maternal emotion coaching, validation, and invalidation of children mediated the relationship between child maltreatment status and child adaptive emotion regulation. However, maternal emotion coaching, validation, and invalidation did not mediate the relationship between maltreatment status and child emotion lability and negativity (Shipman et al., 2007). This study did not assess child behavioural outcomes, or the presence of child PTS symptomatology.

Kim and Cicchetti (2010) conducted a longitudinal study of low-SES families, that involved 215 maltreated children and 206 non-maltreated children, aged 6 to 12 years. Adaptive emotion regulation, externalising behaviours, internalising behaviours, peer rejection, and peer acceptance were measured at two time points, one year apart. Consonant with Maughan and Cicchetti (2002) and Shipman and colleagues (2007), structural equation models revealed that child maltreatment status, multiple maltreatment subtypes, and earlier onset of maltreatment, respectively, were negatively associated with adaptive emotion regulation. Conforming to the tenets of the cumulative risk proposition, in isolation, emotional maltreatment did not add to the variance of emotion regulation. However, in concert with another maltreatment subtype, the adverse impact was greater than with either maltreatment type alone (Kim & Cicchetti, 2010).

In contrast to the earlier findings of Maughan and Cicchetti (2002), with respect to child outcomes, Kim and Cicchetti (2010) found evidence for an association between poor emotion regulation and high, concurrent externalising and internalising behaviour. However, this association was based on teacher reports, rather than maternal reports.

Longitudinal analyses revealed that externalising behaviour at Time 1 predicted externalising behaviour and peer rejection at Time 2, and internalising behaviour at

Time 1 predicted internalising behaviour at Time 2 (Kim & Cicchetti, 2010). This study did not assess the role of maternal parenting factors, the presence of child PTS symptomatology, or child emotion lability and negativity.

Finally, Schulz, Waldinger, Hauser, and Allen (2005) conducted a longitudinal study of adolescents, aged 14 to 15 years, and their parents. The sample included 35 adolescents who were experiencing psychiatric difficulties, and 37 controls. The study revealed that exposure to ongoing environmental stress, in the form of inter-parental hostility, disrupted child emotional regulation.

Schulz and colleagues (2005) reported that the relationship between inter-parent conflict and adolescent levels of hostility and positive engagement, respectively, were moderated by child emotion regulation. Specifically, highly regulated adolescents were less likely to exhibit hostility, and were more likely to exhibit positivity, in the face of inter-parental conflict than their poorly regulated counterparts (Schulz et al., 2005). Outside of inter-parental hostility, this study did not assess the role of maternal parenting factors, the presence of child PTS symptomatology, or child emotion lability and negativity.

Overall, the studies reviewed above point to the importance of the relationship between trauma exposure, emotion regulation, and child externalising behaviour. Bearing these relationships in mind, the next section will explore the diagnosis of child trauma, and highlight the overlap between the sequelae of trauma exposure and clinical categories of child behaviour problems.

5.2.2 Child trauma and clinical diagnoses.

The most common clinical diagnostic category associated with trauma exposure is PTSD, although Wamser-Nanney and Vandenberg (2013) warn that, “the absence of a PTSD diagnosis does not indicate that children exposed to trauma do not have trauma-related difficulties, but rather developmental modifications of the construct may be needed” (p. 672). In particular, child sequelae to trauma exposure tend to be more diverse than those observed in adults, and these tend to be especially complex and pervasive in instances of exposure to complex trauma (Courtois, 2004).

Encouragingly, the diagnostic criteria for PTSD included in the recently published DSM-V (APA, 2013) differ significantly from previous editions, and include a developmentally

sensitive set of criteria for children aged six years or younger (APA, 2013). However, as with ODD, CD, and ADHD, the recent body of research, diagnostic practices, and intervention strategies have been influenced by the definition of PTSD included in the DSM-IV-TR (APA, 2000).

At the diagnostic level, researchers have argued that the symptom profile of a traumatised child could mimic that of CD, ODD, ADHD, panic disorder, adjustment disorder, borderline personality, affective disorder, or phobic disorder (Ford et al., 2000; Terr, 1991). Studies investigating diagnostic comorbidities in children have reported high levels of comorbidity between ADHD and PTSD, and CD and PTSD, respectively (Ford et al., 2000).

Ford and colleagues' (2000) retrospective case-control study involved 165 child psychiatric clinic outpatients aged between 6 and 17 years, with a diagnosis of ADHD-only (30%), ODD-only (16%), comorbid ADHD + ODD (25%), or adjustment disorder (29%). Physical abuse was reported in 10% of adjustment disorder cases, 26% of ADHD cases, 48% ODD cases, and 73% of ADHD + ODD cases. Following the same pattern, sexual abuse was reported in no cases of adjustment disorder, 11% of ADHD cases, 18% of ODD cases, and 31% of ADHD + ODD cases (Ford et al., 2000).

A potential association between trauma exposure and clinical behavioural disorders is evident in the finding that many of the risk factors associated with PTSD are also risk factors for clinical behavioural disorders. These include low SES, familial conflict, negligent or coercive parenting, parental substance or alcohol abuse, neighbourhood violence or crime, and parental psychopathology (Ford et al., 2000; Greenwald, 2002). Further, the symptomatic expression of both PTS and the clinical behavioural disorders point to impairments in underlying information processing, affect regulation, behavioural regulation, and attention (Ford et al., 2000).

It is important to note that the relationships observed between clinical behavioural disorders and PTSD may be bi-directional, interactive, or overlapping (Ford et al., 2000). Traumatic exposure and its sequelae may play an intrinsic role in the development and maintenance of CD (Greenwald, 2002), and may intensify pre-existing ADHD or ODD (Ford et al., 2000). Alternately, the impulsive and self-regulatory aspects of ADHD and ODD have been posited as risk factors for subsequent exposure to trauma, particularly in the form of attachment problems, maltreatment, and accidents (Ford et al., 2000). However, trauma exposure appears to independently

account for a significant portion of the variance in post-traumatic stress (PTS) symptoms even after controlling for ADHD and ODD symptoms, suggesting a direct influence of trauma exposure (Ford et al., 2000).

Taken together, the high level of mutual risk factors, underlying regulatory deficits, observable symptoms, and comorbidity between diagnoses of PTSD and clinical behavioural disorders have prompted concerns that PTS symptoms may often be misdiagnosed as indicative of a clinical behavioural disorder (Ford et al., 2000). Accordingly, Hinshaw (2003) argued for an investigative approach to behaviour problems that acknowledged disruptions to the optimal development of underlying regulatory capacities, rather than adhering to diagnoses and investigations based on the existing clinical nosology, consonant with conclusions drawn in Section 2.1.3. The role of parenting is one factor that can play a role in heightening or attenuating the impact of trauma on the development of underlying regulatory capacities, and this will be addressed in the next section.

5.3 Trauma and the role of parenting

Encouragingly, not all children exposed to early trauma or loss evidence disruptions to healthy behavioural and emotional development (Bailey, Hannigan, Delaney-Black, Covington, & Sokol, 2006). Fewer than 50% of children exposed to acute trauma develop PTS symptoms, although a significantly higher percentage of children exposed to maltreatment, devastating emotional loss, or multiple stressors are likely to be affected (Ford et al., 2000).

Complementing the literature on the adverse effects of non-optimal parenting practices, a number of studies have established that positive parenting practices may act as a protective factor, and potentially promotive factor, with respect to healthy child development and behaviour, even in the face of environmental adversity (Rutter 2012). Indeed, parental behaviour has the ability to influence either a child's *resilience* or vulnerability to PTS symptomatology (APA, 2000). Rutter (2012) defines resilience as "reduced vulnerability to environmental risk experiences, the overcoming of stress or adversity, or a relatively good outcome despite risk experiences" (p. 336). Individual differences in reaction to trauma, stress, and adversity are influenced by a number of factors, including the severity and chronicity of exposure, environmental factors, parental factors, gene-environment interaction, and the nature of the psychological and

physiological coping mechanisms employed by the individual (Briere & Spinazzola, 2005; Greenwald, 2002; Rutter, 2009).

Scheeringa and Zeanah's (2001) meta-analysis revealed that healthy early parent-child relationships were beneficial to all children, and in particular children who had been exposed to trauma or loss. The authors proposed that traumatised children are especially sensitive to, and dependent on, the nature of parenting they receive. Further, the quality and nature of the parent-child relationship, and specifically a mother's ability to both attune to her child's symptomatology and effectively meet her child's needs, appeared to moderate the magnitude of the relation between trauma exposure and adverse outcomes (Scheeringa & Zeanah, 2001).

With respect to the potentially adverse consequences of community violence exposure, Bailey and colleagues (2006) investigated the buffering effect of children's perceptions of their mother's level of acceptance of them. Consistent with Scheeringa and Zeanah's (2001) meta-analysis, children who perceived their mothers' acceptance of them to be moderate or high were less likely to develop post-traumatic stress symptoms, relative children who perceived their mother's acceptance of them to be low.

Recalling that, following traumatic experiences, a lack of integration at the cognitive level is strongly associated with PTS symptomatology, a caregiver's ability to approach her child's negative affect experiences openly and with acceptance may foster the child's ability to tolerate and integrate these emotions (Rosenblum et al., 2008). Further, children whose parents provide empathy and support at times of heightened arousal, and particularly distress, are more likely to develop strategies for self-soothing and managing distress, resulting in a more robust and flexible style of coping (Shipman et al., 2007). Concordantly, Miner and Clarke-Stewart (2008) found that maternal sensitivity and responsiveness predicted lower levels of externalising behaviour in children.

Bailey and colleagues (2006) recruited a cohort of 268 African-American families with a child aged 6 to 8 years, who had previously received care at a university health centre for prenatal substance exposure. Controlling for SES and maternal education, regression analyses revealed that child-reports of exposure to community violence and being a victim of community violence were significant predictors of child-reported PTS symptoms. Child-reported maternal acceptance did not buffer against the development

of child PTS symptoms. The authors concluded that violence exposure may have elicited an immediate stress response in children that later manifests as depression, anxiety, withdrawal, or conduct problems (Bailey et al., 2006).

Similarly, child-reports of exposure to community violence and being a victim of community violence did not predict mother-rated child aggression, delinquent behaviour, anxiety/depression, or withdrawn behaviour. Rather, the associations between child community violence victimisation and later problematic outcomes were moderated by children's perceptions of their mother's acceptance of them (Bailey et al., 2006). Specifically, amongst the group of children who perceived a low level of maternal acceptance, a significant and positive relationship was reported between community violence victimisation and delinquency, anxiety/depression, and withdrawal, respectively. In contrast, no significant associations between community violence victimisation and later problematic outcomes were observed amongst the group of children who perceived a moderate or high level of maternal acceptance (Bailey et al., 2006).

Bailey and colleagues (2006) concluded that it was more appropriate to consider low maternal acceptance a risk factor for adverse child outcomes, rather than to consider moderate or high maternal acceptance as a buffering factor against adverse outcomes. However, the authors conceded that the mechanisms via which the moderating effect of maternal acceptance operated required further exploration, and that the generalisability of their findings required replication in other populations (Bailey et al., 2006).

Katz and Windecker-Nelson (2006) conducted a study using a community sample of 135 mother-child dyads encountering low levels of domestic violence exposure. Children ranged from 4 to 5 years of age. Controlling for marital satisfaction, no association between maternal emotion coaching and domestic violence was found, suggesting that the presence or absence of domestic violence did not significantly affect how mothers approached their children's emotions (Katz & Windecker-Nelson, 2006).

Similar to Bailey and colleagues (2006), Katz and Windecker-Nelson (2006) employed moderation analyses to reveal a significant interaction between an ongoing environmental stressor, in this case domestic violence, and maternal emotion coaching, as a predictor of child aggression, withdrawal, and anxiety/depression (Katz

& Windecker-Nelson, 2006). Specifically, no relationships between domestic violence and child aggression, withdrawal, or anxiety/depression problems, respectively, were observed amongst the group of children whose mother exhibited higher levels of emotion coaching. In contrast, a strong relationship emerged between domestic violence exposure and adverse child outcomes, particularly aggression, amongst the group of children whose mothers' exhibited lower levels of emotion coaching (Katz & Windecker-Nelson, 2006). Maternal reflective functioning and child emotion regulation were not assessed in this study.

5.4 Summary

The first few years of life represent a unique period during which the brain is constantly and rapidly developing, growing, and changing in response to the encountered environmental. Across the lifespan, trauma is so ubiquitous that it is often at risk of being ignored in research and clinical practice. However, a wealth of prospective, retrospective, and cross-sectional studies of infants, children, and adolescents, sampled from both community and clinical populations have reported a strong relationship between early trauma exposure and child externalising behaviour, especially aggression.

Pathways from trauma exposure to observable outcomes are disparate, dynamic, interrelated, and complex. They span the domains of neurology, cognition, social information processing, affect, biology, and personality. However, mirroring the attachment and parenting literature, emotion regulation appears to play an important role in the association between trauma exposure and child externalising behaviour. Indeed, the high level of mutual risk factors, underlying regulatory deficits, observable symptoms, and comorbidity between diagnoses of PTSD and clinical behavioural disorders have prompted concerns that PTS symptoms may often be misdiagnosed as indicative of a clinical behavioural disorder. As such, Investigative approaches that acknowledge disruptions to the optimal development of underlying regulatory capacities, rather than adhering to diagnoses and investigations based on the existing clinical nosology are encouraged.

Encouragingly, not all children exposed to early trauma or loss evidence disruptions to healthy behavioural and emotional development. Complementing the literature on the adverse effects of non-optimal parenting practices, positive parenting practices may act as a protective factor, and potentially promotive factor, with respect to healthy child

development and behaviour, even in the face of environmental adversity. Children whose parents provide empathy and support at times of heightened arousal are more likely to develop strategies for self-soothing and managing distress, resulting in a more robust and flexible style of coping.

Finally, child-reported maternal acceptance does not appear to buffer against the development of child PTS symptoms. However, attachment-based maternal behaviours do appear to moderate associations between trauma exposure or domestic violence exposure, and later depression, anxiety, withdrawal, and aggression.

CHAPTER 6

STUDY RATIONALE AND PROJECT DESIGN

In this Chapter, the rationale for the research and the methodological approach employed are outlined. The key aims of the research are proposed, and the theoretical model to be tested is introduced. The overall plan for conducting two related, but independent, studies to meet the research aims is detailed.

6.1 Rationale for the Present Research

The study of behavioural and mental health difficulties is considered a conceptually complex pursuit (Sroufe, Coffino, & Carlson, 2010). Predisposing, precipitating, protective, and maintaining factors may influence outcomes directly or indirectly, may interact dynamically with other factors to exacerbate, negate, or defer outcomes, or may render the individual more susceptible or resilient to certain outcomes in the face of future risk factors (Sroufe et al., 2010). Further, whether an effect or causal pathway is identified is dependent on what early factors and experiences are assessed, and what outcomes are measured (Sroufe et al., 2010).

Sawyer and colleagues (2001) concluded that the identification of high-risk groups is critical, as it permits early identification and targeting of interventions and effective use of limited resources. The mechanisms giving rise to the relationship between these factors and child and adolescent mental health problems, however, require better understanding (Sawyer et al., 2001).

Greenwald (2002) argued that exposure to significant trauma or loss may be critical to the precipitation and propagation of child behaviour disorders. Further, for children and adolescents with CD, outcomes of contemporary clinical interventions endorsed as best practice range from ineffective to modestly effective (Greenwald, 2002).

Greenwald (2002) proposed that one explanation for the poor level of efficacy observed is that the effects of trauma, and their sequelae, are rarely considered in clinical formulations or intervention programs. Indeed, current conceptualisations of behaviour disorders neither acknowledge, understand, nor aim to treat the potential contributions of trauma, despite the finding that 70-92% of antisocial youths report histories of significant trauma exposure (Greenwald, 2002).

A diverse range of factors may facilitate or inhibit the effects of early exposure to

trauma. Research has only recently begun to suggest a prominent role of attachment-related parenting behaviours and capabilities in the pathway from child trauma exposure to adverse behavioural and mental health outcomes (Katz & Windecker-Nelson, 2006; Lunkenheimer et al., 2007; Shipman, Schneider, Fitzgerald, Sims, Swisher, & Edwards, 2007). Attachment-related parenting factors are hypothesised to impact on distal child outcomes, including aggression, by modifying aspects of children's socio-emotional functioning (Ramsden & Hubbard, 2002). Although existing research has identified a key role of mother's capacity for reflective functioning in children's socio-emotional growth (Slade, Grienemberger et al., 2005), to date, no known studies have investigated the important conceptual link between a mother's capacity for reflective functioning and later child behavioural outcomes, especially in the face of early trauma exposure. The current research aimed to shed light on these relationships.

Rutter (2009) argued that, when undertaking research that is intended to influence clinical practice, weighting investigations toward the identification of factors within the causal pathway that lend themselves to circumvention or modification represents an important consideration. Factors, such as parental reflective functioning capacity, parenting styles, and the emotional climate within the familial environment, constitute malleable factors that lend themselves to modification (Burke et al., 2002).

Research indicates that the emergence of problematic externalising behaviours in children is attributable to an aggregation of risk factors, rather than the presence of, or exposure to, a single risk factor (Burke et al., 2002). Currently, there is not sufficient empirical or qualitative research evidence to specify the manner in which risk factors assert their influence, or the manner in which protective factors assert their influence, either as buffers against the detrimental impact of risk factors or facilitators of enhanced child outcomes (Burke et al., 2002). Efficacious interventions require a fuller understanding of the aetiological mechanisms underlying externalising behaviours (Bayer et al., 2008).

An elevated probability of child behavioural or mental health problems has not been associated with either the presence or absence of any single risk factor in isolation (Browne et al., 2012; Gutman et al., 2003). Rather, the presence of a constellation of risk factors, and the cumulative strength of these, appears to more consistently predict increased rates of child behaviour problems (Browne et al., 2012; Gutman et al., 2003). Indeed, children often experience clusters of risks or re-occurring stressors. These

clusters tend to be multi-systemic in nature, with risk factors spanning the biological, neurological, cognitive, social, and communication domains (Browne et al., 2012).

Accordingly, single-domain and single-factor investigations have been deemed inappropriate for the study of the aetiology of specific child behavioural outcomes (Frick & Dickens, 2006). Rather, cumulative risk models that incorporate the relative contributions of a range of contributing factors simultaneously are considered optimal (Frick, 2006). With respect to problematic child behavioural outcomes, cumulative risk models suggest that the greater the number of risks, the greater the likelihood the specific disorder or symptomatic outcomes will be present (Greenwald, 2002). Specifically, cumulative risk factor models have shown that risk factors for child behavioural problems may be graded, additive, or interactive (Anda et al., 2006; Frick, 2006). Or, they may conform to the '*vulnerable and reactive*' model of resilience, whereby the impact of one risk factor is only experienced and exacerbated upon subsequently encountering an additional risk factor (Luthar, Cicchetti, & Becker, 2000, p. 548).

Importantly, dispositional and contextual cumulative-risk models do not necessarily acknowledge potential mechanisms, or disruptions to the normal developmental processes that underpin the trajectories from risk factors to outcomes (Frick, 2006; Frick & Dickens, 2006). In an attempt to address this limitation, developmental pathway models propose empirically and theoretically driven causal pathways from risk factors to outcomes via affected psychological, neuropsychological, or biological mechanisms (Frick, 2006).

The present research proposed a theoretically-driven cumulative-risk pathway model, from risk factors to outcomes via emotion regulation. The proposed model is depicted in Figure 6.1.

A number of studies more restricted in scope have reported associations between subsets of the variables depicted in Figure 6.1 (e.g., Bailey et al., 2006; Gottman et al., 1996; Katz & Windecker-Nelson, 2006; Lunkenheimer et al., 2007; Maughan & Cicchetti, 2002; Ramsden & Hubbard, 2002; Shipman et al., 2007). However, to date, no studies have tested the associations between these salient variables simultaneously.

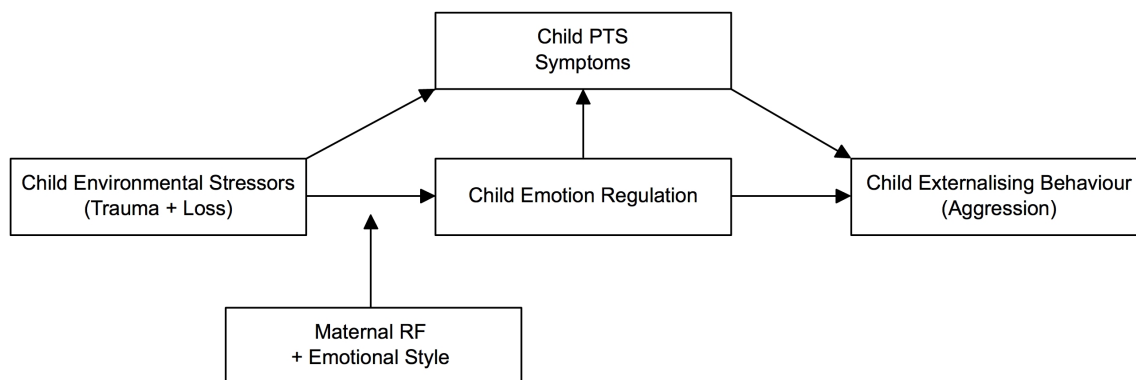


Figure 6.1. Proposed relationships between child trauma and loss, child emotion regulation, child post-traumatic symptoms, and child externalising behaviour, moderated by maternal parenting factors.

Further, several of the limitations of prior research, as noted in previous sections, were addressed in the current research via the use of (1) a standardised measure of child adaptive emotion regulation and affect lability/negativity, (2) developmentally appropriate trauma exposure and PTS scales, (3) empirically-derived outcome variables, rather than DSM-based diagnoses, and (4) adequate sample sizes. In addition to aggression, the present research also measured a subset of child outcomes that, when measured, were consistently highlighted in the literature as co-occurring with aggression. These included rule-breaking behaviour, attention problems, withdrawn/depressed behaviours, and anxious/depressed behaviours (e.g., Dunsmore et al., 2013).

Smith (1996) proposed that qualitative studies are important vehicles for enriching areas of the literature that have largely only been studied quantitatively. Although an extensive body of quantitative data pertaining to a narrow set of parental experiences and outcomes exists in the literature, open and in-depth explorations of the experiences and needs of parents, as well as parental attitudes toward their children, and approaches to parenting, appear to be lacking. No published qualitative studies investigating the experiences of parents of children who exhibit clinical levels of behaviour problems were known to the researchers. Investigations looking at the impact of parental RF have largely been limited to mothers of infants and toddlers (Benbassat & Priel, 2012). There exists a dearth of knowledge regarding the role of maternal RF during childhood and adolescence (Benbassat & Priel, 2012). Further, to date, no known studies of parental RF have been conducted with parents of children

with clinically-significant levels of behavioural difficulties. The current research was designed to be one of the first studies to contribute to these clinically relevant domains of enquiry.

6.2 Aims and Objectives of the Present Research

Externalising behaviours represent the observable outcome of a range of interacting child vulnerabilities and strengths, environmental events, and risk-enhancing or risk-buffering parental factors (Greenwald, 2002). The current research comprises two complementary studies, each designed to elucidate a clearer understanding of a range of factors that are highlighted in the literature as playing a role in influencing the expression of externalising behaviours in children, but are not currently incorporated within the clinical diagnostic nosology.

In order to expand on the body of literature pertaining to the aetiology and maintenance of externalising behaviour disorders, the broad goals of the proposed studies were to conduct exploratory, applied research that is of clinical interest and use the findings to suggest recommendations for principles of diagnosis and treatment for aggressive children and their parents, within a multi-disciplinary team.

Four key aims were devised:

- Provide a clearer understanding of the roles of, and empirical relationships between, child trauma history, maternal factors, child emotion regulation, and child behavioural outcomes.
- Contribute empirical and qualitative findings to the debate surrounding the inclusion of child trauma exposure and maternal factors into clinical and diagnostic conceptualisations of child behaviour problems.
- Report on the prevalence of child trauma, and mental health concerns within a community sample of Western Australian children and their families, and a clinically-referred sample of Western Australian children and their families.
- Explore the conceptually intuitive relationship between maternal RF capacity and maternal emotional styles, which has not been investigated in any known empirical studies.

To achieve these aims, two studies were undertaken. Each employed a number of parent-report and maternal self-report questionnaires probing child trauma history, child

PTS symptomatology, child emotion regulation and affect lability/negativity, child behavioural outcomes, maternal RF, and maternal parenting styles. Study 1 explored a large community sample of children and their mothers. Study 2 explored a smaller, clinical sample of children referred for behavioural problems, and their mothers. In addition, Study 2 built on the findings of Study 1, via the inclusion of a more in-depth, qualitative measure of maternal RF.

6.3 Overall Plan for the Present Research

The present research was designed to gather data pertaining to child behavioural outcomes, and a range of precipitating factors, that was representative of both community populations and clinical populations within Western Australia. Participants were recruited from two main sources. The community sample of boys and girls drew from public schools in the Western Australian area.

Surveys relying on the voluntary participation of households are susceptible to sampling-bias, especially if certain types of families are less likely to participate, and these non-represented families are pertinent to the research aims (Sawyer et al., 2001). Families with children with behaviour disorders tend to encounter higher rates of household disharmony, exposure to environmental stressors, parental substance abuse and illiteracy, and ongoing demands on parental time and resources, making this population uniquely difficult to engage in research studies (Landy, 2011). To ensure families affected by clinical levels of disruptive child behaviour were represented, a sample of participants was recruited from a Western Australian clinical service that provides interventions for severe child behavioural problems.

Both the community and clinical samples targeted children of primary school age, ranging from 4.8 to 12.9 years. It has been widely established that children begin exhibiting chronic physically aggressive behaviour many years prior to adolescence (Tremblay, 2006). As such, research has tended to focus on the toddler and preschool years, a period during which children are developing many skills, including self-regulation (Combs-Ronto, Olson, Lunkenheimer, & Sameroff, 2009). Longitudinal studies indicate that by school age, the particular trajectory of physical aggression use to which an individual will conform beyond the childhood years tends to be identifiable and stable (Tremblay, 2006). Similarly, attentional and hyperactivity problems usually exist prior to school age, but only tend to be acknowledged and reported by parents when difficulties arise in the face of the increased environmental, cognitive, social, and

self-regulatory demands placed on children during the transition into school (First & Tasman, 2004; Olson et al., 2011). Understanding the mechanisms underlying aggressive behaviour in primary school-age children may prove valuable in the targeting of high-risk pre-school aged children (Tremblay, 2006).

In all instances, mothers were the respondents. Mothers contributed parent-report data of child behaviour, and self-report data of their own thoughts, feelings and behaviour. De Lange and Olivier (2004) argue that in families with externalising children, mothers are usually tasked with the responsibility of managing affected children and helping them cope with their aggressive behaviour. Within at-risk populations, the prevalence of mothers as the primary or care-giver also tend to be high (O'Neal & Magai, 2005). O'Neal and Magai's (2005) investigation of at-risk children residing in stressful, high crime inner city neighborhoods reported that the primary caregiver was the mother in 79% of families, the grandmother in 8%, and the father in 6%. Further, in 73% of families surveyed, the biological father did not reside within the household. In contrast, in only 12% of the families surveyed, the biological mother did not reside within the household (O'Neal & Magai, 2005). In addition, to date, the majority of parenting and RF-focussed studies have restricted their scope to responses from mothers, and families where mothers are the primary-caregiver of the affected children.

A set of variables deemed theoretically, clinically, and empirically salient were selected in order to test in a cumulative risk model for child aggression (see Figure 6.1). It was imperative that the model be comprehensive, but concise, to ensure the sample size recruited would provide enough power to generate statistically reliable and meaningful results. The nature of the variables employed was similarly important, particularly with respect to measured child outcomes.

Despite the observed discordance with DSM categories, which form the basis of a substantial body of psychopathological research and treatment protocols (Nakamura, Ebesutani, Bernstein, & Chorpita, 2009), the current study adopted the empirically-derived symptom categories established by Achenbach and colleagues (2003), who employed principal components analyses and exploratory factor analyses to investigate data from a sample of 14,853 children. Confirmatory factor analyses were subsequently conducted to refine single-factor models and finalise multifactor models (Achenbach et al., 2003).

Noting that a measure of complex trauma outcomes does not currently exist (Wamser & Vandenberg, 2013), a developmentally appropriate PTS measure that encompasses a broader range of child-relevant symptoms, including depression, anxiety, difficulty forming and maintaining relationships, self-destructive behaviour, and risk-taking (Courtois, 2004) was employed in the current study.

Child dissociation, verbal ability, and child age were not analysed. Importantly, previous research has reported that these factors tend not to differentiate between aggressive and non-aggressive groups, or high and low emotion regulation groups (Shields & Cicchetti, 1998). Similarly, young maternal age has recently been shown to significantly correlate with other maternal risk variables. However, in multivariate models, this factor tends not to contribute a significant proportion of the variance in the prediction of externalising behaviour (Robinson et al., 2008). Finally, parent education level has been shown to be unrelated to child PTS symptoms (Ford et al., 2000). In light of these findings, these maternal variables were not included in the current research.

To ensure the burden on participants remained reasonable (Sawyer et al., 2001), a number of short questionnaires with valid, reliable, informative, and relevant subscales, and strong psychometric properties were administered. To ensure participants would not perceive participation in the study as an unwarranted intrusion into their private lives (Sawyer et al., 2001), the number of personal questions related to family demographic information was limited, and participants were permitted to complete the questionnaires anonymously.

Study 1 involved a cross-sectional, correlational, quantitative design. Data from the large community sample was used to empirically test the model depicted in Figure 6.1. Interpretations of results were hoped to further our understanding of child aggression by elucidating co-morbid outcomes, pertinent risk factors, and the mechanisms potentially underlying these relationships. Further, the results of this study provided an empirical basis for suggested amendments to current diagnostic and intervention approaches.

In Study 1, data pertaining to children who had been diagnosed with an Autism Spectrum Disorder (ASD) were excluded from the final analyses. Children with a diagnosis of ASD tend to display higher rates of externalising behaviours, including delinquent and aggressive behaviours, than their typically developing peers (Wilson,

Berg, Zurawski, & King, 2013). Comorbid intellectual disability, epilepsy, sensory difficulties, and ADHD are also common within this population (Malcolm-Smith, Hoogenhout, Ing, Thomas, & de Vries, 2013). Importantly, the problematic behaviours observed in children affected by ASD are understood to derive from an aetiological pathway that is distinct from that of children without this diagnosis (Malcolm-Smith et al., 2013). Although the causes of ASDs remain elusive, a strong genetic component is believed to play a role (Malcolm-Smith et al., 2013). Accordingly, relative to typically developing children, children with a diagnosis of ASD appear to respond differently to interventions for behaviour problems, including those involving modulations of parental behaviour and emotion coaching (Wilson et al., 2013).

Concurrently, Study 2 was undertaken. Study 2 utilised a mixed-methods design. Quantitative, cross-sectional data from the clinical sample were analysed. The small sample size prevented the testing of the model depicted in Figure 6.1. Findings were compared to the results of Study 1 and comparable previous studies.

The qualitative case study component of Study 2 involved the thematic analysis of semi-structured interviews with mothers of the referred children. Small sample sizes are considered optimal for qualitative studies, as the in-depth case-by-case analysis of individual transcripts is labour-intensive. More importantly, the aim of the analysis was to provide detail about the perceptions and understandings of a particular, narrowly defined group for whom the research questions were significant (Smith & Osborn, 2003).

The thematic analyses of transcripts were conducted according to the tenets of the *Interpretative Phenomenological Analysis* (IPA) process (Smith, 1996; Smith & Osborn, 2003) (see Section 6.3.1). The analysis of transcripts was guided toward an exploration of the thoughts, feelings, and experiences of mothers with clinically aggressive children in order to better understand the hopes, joys, struggles, and facets of daily life that are pertinent to this population. In particular, mothers' perceptions of the impact that their child's behavioural problems have had on themselves, their child, their family, and the mother-child relationships, were targeted. Study 2 was designed to contribute to this often-overlooked area of enquiry.

Smith (1996) claimed that epistemological and methodological approaches to psychological research other than the traditional quantitative paradigm, such as qualitative research, have the potential to complement, expand upon, and deepen

existent bodies of knowledge. Relative to quantitative studies, qualitative studies present an opportunity for deeper exploration of complex psychological phenomena and behavioural outcomes in particular, by permitting researchers to better understand the lived experiences of individuals and the subjective meanings that they attach to events (Fung, 2007; Smith & Osborn, 2003). Indeed, Fung (2007) claims that subjective human reports may be more important to the investigation of psychological phenomena than quantitative data. Pertinent to the current research, de Lange and Olivier (2004) claim that there is a relative paucity of data being collected on the parental experience of managing a child with severe aggression, or the psychological and social implications of managing a child facing these difficulties.

Further, semi-structured interviews permit the researcher and participant to partake in an exchange whereby a set of existing questions can be amended or explored in greater depth in light of the participants' responses (Smith & Osborn, 2003). This flexibility facilitates the development of rapport, permits the interviewer to provide empathic responses, and allows a richer cache of novel information to be captured (Smith & Osborn, 2003). As such, semi-structured interviews are considered the exemplary method for qualitative analyses (Smith & Osborn, 2003).

6.3.1 Interpretative Phenomenological Analysis.

Study 2 used the IPA process to guide the qualitative analysis. A strong overlap has been noted between IPA's core tenets of exploration of meaning and sense-making, and the core concerns of cognitive psychology (Smith & Osborn, 2003). In their critical review of the use of IPA as a methodological tool in health psychology research, Brocki and Wearden (2006) concluded that IPA's theoretical foundation and detailed procedural guide rendered it an applicable and useful approach to investigating a broad range of health psychology topics. The authors also noted that the outcomes of IPA studies were being reported in a growing number of published peer-reviewed research articles, and that these outcomes were particularly relevant for studies aiming to explore processes operating within models, in contrast to traditional quantitative studies which tend to be more weighted toward outcome measures (Brocki & Wearden, 2006).

Smith and Osborn (2003) state that during IPA, the central aim for the researcher is to engage in an interpretive relationship with the transcript, making attempts to extract meaning from the content and gain an understanding of the complexities inherent within these meanings. In order to achieve this goal, Smith and Osborn (2003) outlined

a five-step IPA procedure that is repeated case-by-case, and conforms to an idiographic approach to analysis, whereby examples of initially extracted meanings are subsequently grouped into more general categories and claims. This process is outlined below. For a full description, see Smith and Osborn (2003).

Step 1: Search for preliminary meanings or themes as part of a free textual analysis, and note these in the left margin. This may include associations or connections, interpretations, comments on use of language, sense of the participant, or notable similarities, differences, or contradictions that arise within the transcript (Smith & Osborn, 2003).

Step 2: Re-read transcript and note emerging themes as titles in the right margin. This necessitates a higher level of abstraction, and may require the incorporation of psychological terminology (Smith & Osborn, 2003).

Step 3: List the emerging themes on a separate sheet of paper, and search for meaningful connections. This may require re-order according to analytical or theoretical considerations. Clusters of meanings representing super-ordinate concepts are likely to emerge at this point (Smith & Osborn, 2003).

Step 4: Create a table of super-ordinate concepts, and name these. Delete entries that do not contribute to a coherent understanding of the transcript, or do not possess rich evidence (Smith & Osborn, 2003).

Step 5: Repeat Steps 1 to 4 with additional transcripts. Finally, construct a table of super-ordinate themes and reduce the number of themes. This requires that the researcher prioritise themes based on richness of evidence, prevalence within the data, and usefulness to providing understanding or insight into the topic or population under investigation (Smith & Osborn, 2003).

Study 1 is detailed in Chapter 7. Study 2 is detailed in Chapter 8.

CHAPTER 7

STUDY 1: INVESTIGATING A COMMUNITY SAMPLE

In order to expand on the body of literature pertaining to the aetiology and maintenance of externalising behaviour disorders, the first aim of Study 1 was to report on the current prevalence of child mental health diagnoses and trauma exposure within a community sample of Western Australian families. To achieve this aim, maternal-reports of child mental health diagnosis, child trauma history, and child PTS symptoms were administered to a large community sample of mothers currently living in Australia with a child aged 4 to 12 years.

The second aim of Study 1 was to investigate the empirical association between maternal RF capacity and maternal emotion coaching styles, which has not been investigated in any known empirical studies, despite the theoretical overlap between these two constructs (Sharp & Fonagy, 2008). To achieve this aim, questionnaire measures of maternal RF and maternal emotion coaching were administered to a large community sample of mothers with a child aged 4 to 12 years. Establishing an association between maternal RF and maternal emotional style may go some way toward explaining why some parents are more likely adopt non-optimal parenting practices, such as hostile or rejecting parenting.

The third aim of Study 1 was to provide a clearer understanding of the empirical relationships between maternal factors, child history of trauma and loss, child adaptive emotion regulation, and child behavioural outcomes. To achieve this aim, maternal-report questionnaire measures of child trauma exposure, emotion regulation, lability and negativity, post-traumatic symptoms, anxiety, aggression, withdrawn/depressed behaviours, and attention problems were administered to a large community sample of mothers with a child aged 4 to 12 years. In addition, maternal self-report questionnaire measures of RF, emotion coaching, and emotion dismissing parenting were administered.

The fourth aim of Study 1 was to contribute empirical findings to the debate surrounding the inclusion of child trauma exposure and maternal factors into clinical and diagnostic conceptualisations of child behaviour problems. To achieve this aim, a theory-driven cumulative-risk model depicting a proposed network of relationships between child trauma and loss, maternal parenting factors, child emotion regulation,

and child behavioural outcomes (see Figure 6.1) was tested using data from a large community sample of children and their mothers.

Based on findings reported in the current literature, the four aims of Study 1 generated nine hypotheses:

- H1. Children in the community sample were expected to be representative of the wider Western Australian population, conforming to prevalence trends noted in previous, comparable studies.
- H2. The direct relationship between child trauma exposure and PTS symptoms was expected to be significant and positive.
- H3. The direct relationship between child trauma exposure and adaptive emotion regulation was expected to be significant and negative. Alternately, the direct relationship between child trauma exposure and emotion lability/negativity was expected to be significant and negative.
- H4. Higher self-reported maternal RF was expected to be associated with higher levels of emotion coaching parenting. Alternately, lower self-reported maternal RF was expected to be associated with emotion dismissing parenting.
- H5. The direct relationships between self-reported maternal RF and maternal emotion coaching parenting, respectively, and child adaptive emotion regulation were expected to be significant and positive. Alternately, the direct relationships between maternal RF and maternal emotion coaching parenting, respectively, and child lability and negativity were expected to be significant and negative.
- H6. The direct relationship between maternal emotion dismissing parenting and child adaptive emotion regulation was expected to be significant and negative. Alternately, the direct relationship between maternal emotion dismissing parenting and child lability and negativity was expected to be significant and positive.
- H7. The direct relationships between child adaptive emotion regulation and adverse child outcomes, including anxious/depressed behaviours, withdrawn/depressed

behaviours, aggression, and attention problems, respectively, were expected to be significant and negative.

- H8. The direct relationships between child lability and negativity and adverse child outcomes, including anxious/depressed behaviours, withdrawn/depressed behaviours, aggression, and attention problems, respectively, were expected to be significant and positive.
- H9. The theory-driven cumulative-risk model depicted in Figure 6.1 was expected to be verified empirically by the large sample of community data obtained in the current study. In the model, maternal parenting factors were hypothesised to act as moderator variables (Baron & Kenny, 1986) that systematically affect the relationship between child trauma and child emotion regulation. Specifically, maternal parenting factors weighted toward lower RF and an emotion dismissing style, were expected to strengthen the relationship between child exposure to environmental stressors and adverse outcomes. Alternately, maternal parenting factors weighted toward higher RF and an emotion coaching style, were expected to reduce the relationship between child exposure to environmental stressors and adverse outcomes.

7.1 Method

7.1.1 Participants.

Study 1 involved a community sample of mothers with primary school aged children who were currently attending 1 of 14 public primary schools located in the Western Australian region. A total of 339 questionnaires were returned to the researchers, representing a response rate of approximately 16% of eligible parents.

Twenty-five of the returned questionnaires were excluded from the analyses due to being either incomplete (16 questionnaires), completed for a child outside the required age-range (3 questionnaires), or completed for a child diagnosed with an Autism Spectrum Disorder (6 questionnaires). Analyses were conducted on the remaining 314 questionnaires.

7.1.1.1 Participant recruitment.

The target population for Study 1 were Western Australian mothers who had resided with their biological, primary school aged children since birth. Timely access to participants, as well as cost and logistical benefits pointed to the enlisting of a *convenience sample* (Hulley, Cummings, Browner, Grady, & Newman, 2007) of public primary schools located in the Western Australian region. Specifically, the broad network of public primary schools affiliated with the Family Pathways service (see Appendix A) were targeted for involvement in the study. The convenience sample was deemed valid for the current study by the researchers, as the pool of participating schools spanned the SES continuum and represented diverse areas of metropolitan Western Australia (Hulley et al., 2007). In addition, a *simple random sample* (Orav, 1995) of public primary schools in the metropolitan area were targeted.

School principals were contacted and provided information about the study (see Appendix C). Fourteen principals expressed an interest in having their school participate in the research. Following a brief meeting with the researchers, principals provided written consent for questionnaire packs to be distributed to students (approximately 2020) with the school newsletter.

A *list sampling frame* (Lewis-Beck, Bryman, & Liao, 2004) was subsequently employed to recruit the participant sample, whereby all families with one or more enrolled children were invited to participate. This approach has been deemed appropriate for mail surveys (Lewis-Beck et al., 2004).

To maximise ecological validity, no inclusion or exclusion criteria were placed on family status, ethnicity, or household income. Students engaged with Family Pathways were excluded from Study 1.

7.1.1.2 Maternal and family demographics.

Study 1 involved a community sample of 314 mothers. Table 7.1 and Table 7.2 report the maternal and familial demographic data for Study 1. Family homes comprised an average of 1.98 adults ($SD = 0.62$, $range = 1 - 6$), and 2.25 children ($SD = 0.84$, $range = 1 - 6$). Independent samples *t*-tests revealed that, relative to med-high SES households, low SES households had significantly fewer adults at home, $t(312) = 5.80$, $p < .001$, and significantly fewer children at home, $t(312) = 2.53$, $p = .032$ (see Table 7.1).

Table 7.1

Means, Standard Deviations, and Ranges for Maternal and Familial Demographic Data

Variable	SES							
	Overall (N = 314)		Low (n = 22)		Mid (n = 139)		High (n = 153)	
	M (SD)	Range	M (SD)	Range	M (SD)	Range	M (SD)	Range
Adults at home	1.98 (0.62)	1 - 6	1.27 (0.46)	1 - 2	1.96 (0.69)	1 - 6	2.10 (0.51)	1 - 5
Children at home	2.25 (0.84)	1 - 6	1.82 (0.91)	1 - 4	2.42 (0.88)	1 - 6	2.17 (2.17)	1 - 5
Mat mental health	0.90 (1.02)	0 - 5	1.23 (0.92)	0 - 3	0.95 (1.07)	0 - 5	0.80 (0.80)	0 - 4

The majority of mothers (62.1%) were married, and 93% reported a household income that fell within the middle or upper socio-economic status (SES) range, according to income ranges specified by the Australian Bureau of Statistics (2009). Over half of the mothers (53.2%) reported having experienced at least one type of mental health issue, with incidences of depression (41.7%) and anxiety (31.8%) being the most prevalent. Amongst mothers reporting at least one type of mental health issue ($n = 167$), 47.9% reported experiencing one type, 38.3% reported experiencing two types, and 13.8% reported experiencing three or more types (see Table 7.2).

Table 7.2

Frequencies and Percentages for Maternal and Familial Demographic Data

Variable	Overall (N = 314)		Low (n = 22)		Mid (n = 139)		High (n = 153)	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Parental relationship								
Single	46	14.6	15	68.2	27	19.4	4	2.6
Married	195	62.1	5	22.7	79	56.8	111	72.5
Divorced	16	5.1	1	4.5	9	6.5	6	3.9
Defacto	50	15.9	0	0.0	20	14.4	30	19.6
Blended	4	1.3	0	0.0	2	1.4	2	1.3
Other	3	1.0	1	4.5	2	1.4	0	0.0
Maternal mental health								
ANX	100	31.8	11	50.0	45	32.4	44	28.8
DEP	131	41.7	12	54.5	60	43.2	59	38.6
UL/T	24	7.6	2	9.1	13	9.4	9	5.9
PTS	20	6.4	1	4.5	9	6.5	10	6.5
BP	7	2.2	1	4.5	4	2.9	2	1.3
Other	4	1.3	0	0.0	1	0.7	3	2.0
Maternal mental health comorbidity								
None	147	46.8	5	22.7	63	45.3	79	51.6
1	80	25.5	9	40.9	35	25.2	36	23.5
2	64	20.4	6	27.3	30	21.6	28	18.3
≥3	23	7.3	2	9.1	11	7.9	10	6.5

Note. ANX = anxiety, DEP = depression, UL/T = unresolved loss/trauma, PTS = post-traumatic stress, BP = bipolar disorder

7.1.1.3 Child demographics.

Study 1 involved parent-report data on a community sample of 314 children. Table 7.3 and Table 7.4 report the child demographic data for Study 2. The average age was 7.96 years ($SD = 1.39$, $range = 4.8 - 12.9$). The sample comprised 163 males (51.9%) and 151 females (48.1%). A minority (9.9%) of children were reported as having received a mental health diagnosis ($M = 0.12$, $SD = 0.41$, $range = 0 - 4$). Independent samples T-tests revealed no significant between-group differences with respect to mean number of mental health diagnoses across gender groups or SES groups (see Table 7.3).

Table 7.3

Means, Standard Deviations, and Ranges for Child Descriptive Demographic Data

		Gender (Child)		SES		
Variable	Overall (<i>N</i> = 314)	Male (<i>n</i> = 163)	Female (<i>n</i> = 151)	Low (<i>n</i> = 22)	Mid (<i>n</i> = 139)	High (<i>n</i> = 153)
Age						
<i>M</i> (<i>SD</i>)	7.96 (1.39)	8.00 (1.29)	7.92 (1.50)	7.77 (1.28)	7.85 (1.49)	8.09 (1.32)
<i>Range</i>	4.8 - 12.9	5.0 - 11.3	4.8 - 12.9	5.0 - 9.8	4.8 - 12.9	5.5 - 11.3
Child Mental health Diagnoses						
<i>M</i> (<i>SD</i>)	0.12 (0.41)	0.13 (0.45)	0.11 (0.37)	0.14 (0.35)	0.12 (0.36)	0.12 (0.46)
<i>Range</i>	0 - 4	0 - 4	0 - 2	0 - 1	0 - 2	0 - 4

The most prevalent mental health diagnoses reported were ADHD (2.9%), and anxiety (2.5%). Amongst children who were reported as having received at least one clinical diagnosis ($n = 31$), 83.9% had received only one diagnosis, 12.9% had received two comorbid diagnoses, and one child (3.2%) was reported as having been diagnosed with three or more comorbid issues (see Table 7.4).

7.1.2 Measures.

Study 1 utilised a questionnaire booklet containing six parent-report measures, and a set of questions pertaining to basic familial, maternal, and child demographic information. Questionnaire booklets were completed by mothers and returned to the investigators for scoring, interpretation, and analyses. Descriptions and psychometric properties of the six measures employed in Study 1 are outlined below.

Table 7.4

Child Mental Health Diagnoses and Comorbidity

Variable	Overall (N = 314)		Gender (Child)				SES					
			Male (n = 163)		Female (n = 151)		Low (n = 22)		Mid (n = 139)		High (n = 153)	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Child mental health diagnoses												
ADHD	9	2.9	6	3.7	3	2.0	3	13.6	3	2.2	3	2.0
ODD	1	0.3	1	0.6	0	0.0	0	0.0	0	0.0	1	0.7
CD	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
PTS	2	0.6	0	0.0	2	1.3	0	0.0	1	0.7	1	0.7
ANX	8	2.5	5	3.1	3	2.0	0	0.0	3	2.2	5	3.3
DEP	1	0.3	0	0.0	1	0.7	0	0.0	1	0.7	0	0.0
Other	16	5.1	10	6.1	6	4.0	0	0.0	7	5.0	9	5.9
Child mental health comorbidity												
None	283	90.1	145	89.0	138	91.4	19	86.4	125	89.9	139	90.8
1	26	8.3	16	9.8	10	6.6	3	13.6	12	8.6	11	7.2
2	4	1.3	1	0.6	3	2.0	0	0.0	2	1.4	2	1.3
≥3	1	0.3	1	0.6	0	0.0	0	0.0	0	0.0	1	0.7

Note. ADHD = Attention Deficit/Hyperactivity Disorder, ODD = Oppositional Defiant Disorder, CD = Conduct Disorder, PTS = Post-traumatic Stress Disorder, ANX = Anxiety Disorder, DEP = Major Depression

7.1.2.1 Maternal factors.

Maternal Emotional Styles Questionnaire (MESQ; Lagace-Seguin & Coplan, 2005).

The MESQ is a parent-report questionnaire containing 14 items rated on a 5-point Likert scale from 1 ("Strongly disagree") to 5 ("Strongly agree"). The instrument was developed to assess maternal *emotion coaching* and *emotion dismissing* parenting styles, particularly in negative emotional contexts (fear, anger, sadness). Items probe the way mothers cope with their own and their child's emotions, and how their child copes with his or her own emotions. The MESQ produces scores on two scales, representing emotion coaching (7 items) and emotion dismissing (7 items) parenting styles, and possesses excellent psychometric properties. The Cronbach's alpha for each scale are reported to be .90 (emotion coaching scale) and .92 (emotion dismissing scale; Lagace-Seguin & Coplan, 2005). Both scales demonstrate moderate test-retest reliability ($r = .53 - .58$) and a high degree of construct validity (Lagace-Seguin & Coplan, 2005). For the current study, the sum of items on each scale was used as the measure of emotion coaching and emotion dismissing parenting styles, respectively.

Parental Reflective Function Questionnaire (PRFQ; Luyten et al., 2009). The PRFQ is a parent self-report questionnaire containing 39 items rated on a 7-point Likert scale, from 1 ("Strongly disagree") to 7 ("Strongly agree"). The instrument was developed as a brief alternative to interview-based measures of parental reflective function, such as

the *Adult Attachment Interview* (AAI; George, Kaplan, & Main, 1985) RF scale (Fonagy, Steele, Steele, & Target, 1998a), and the *Parent Development Interview* (PDI; Slade et al., 2003). Items assess the multidimensional RF construct across three dimensions: (1) curiosity about mental states and attempts to consider the mental states underlying behaviour, (2) disavowal of mental states or defensiveness against mentalising, and (3) awareness of the developmental nature of mental states. The PRFQ is suitable for use with both mothers and fathers of infants and young children, from a range of socio-economic and educational backgrounds (Luyten et al., 2009; Rutherford, Goldberg, Luyten, Bridgett, & Mayes, 2013). The three factor structure has been supported by exploratory and confirmatory factor analysis (Rutherford et al., 2013), and the measure possesses good internal consistency, with alpha values ranging from .70 to .82 (Rutherford et al., 2013). For the current study, the average item score (excluding the 8 middle scale items, see Luyten et al., 2009) was used as the measure of maternal RF. Higher scores indicate higher RF capacity.

7.1.2.2 Child factors.

Parent Report of Post-traumatic Symptoms (PROPS; Greenwald & Rubin, 1999). The PROPS is a parent-report questionnaire containing 32 items rated on a 3-point Likert scale, from 0 ("Not true or rarely true") to 2 ("Very true or often true"). The instrument was developed to measure the distinct range of post-traumatic symptoms exhibited by children, in contrast to the adult-oriented and narrower range of symptoms associated with the DSM-IV-TR (APA, 2000) Post-Traumatic Stress Disorder diagnostic category (Greenwald, 2005). The authors propose that the measure is appropriate for use in mental health research and as a screening tool, with both community and clinical populations. The PROPS has been found appropriate for males and females of school age, 6 to 18 years (Greenwald, 2005). The PROPS possesses excellent psychometric properties, with an internal consistency coefficient of .87 - .93 (Greenwald & Rubin, 1999; Jurkovic, Sarac, Kuperminc, & Morrell, 2002; Russell, O'Connor, Greenwald, & Rubin, 2002; Wiedemann & Greenwald, 2000), test-retest reliability coefficient of .79 (Greenwald & Rubin, 1999), and acceptable factorial validity (Greenwald & Rubin, 1999; Jurkovic et al., 2002; Wiedemann & Greenwald, 2000), and content validity (Greenwald & Rubin, 1999). For the current study, sum of item scores was used as the measure of child post-traumatic symptoms. Higher scores indicate higher symptomatology. Scores above 16 suggest cause for clinical concern (Greenwald, 2005).

Life Incidence of Traumatic Events - Parent Report (LITE-P; Greenwald & Rubin, 1999). The LITE-P is a parent-report questionnaire containing 16 items. The instrument was developed to measure a child's history of loss and exposure to traumatic, stressful, or adverse events. Items address both interpersonal and environmental events, including those related to accidents involving self or other, death in the family, witnessing domestic violence, crime, natural disasters, and physical, emotional, or sexual abuse (O'Connor & Russell, 2004). Parents are required to endorse the types of adverse events their child has encountered, and provide an estimate of the number of times their child has encountered each endorsed event type. The authors purport the measure to be appropriate for use in mental health research and as a screening tool, with both community and clinical populations (Greenwald & Rubin, 1999). The LITE has been used to validate two measures of post-traumatic symptoms: *Child Report of Post-traumatic Symptoms* (Greenwald & Rubin, 1999), *Parent Report of Post-traumatic Symptoms* (Greenwald & Rubin, 1999), and has shown strong positive correlations ($r = .53 - .56$) with the *Trauma Symptom Checklist for Child* (TSCC; Briere & PAR Staff, 1996). The authors suggest it possess psychometric properties comparable to those of similar measures, such as the *Stressful Life Events Screening Questionnaire* (SLESQ; Goodman, Corcoran, Turner, Yuan, & Green, 1998), with a median test-retest *kappa* of .73 (Greenwald, Rubin, Russell, & O'Connor, 2002). For the current research, the items "Been made to do sex things" and "Been tied up, locked in a small space" were not deemed appropriate by the Western Australian Department of Education's Ethics Committee. These items were removed and replaced with "Family member threatened" and "Taken away from family", respectively. For the current study, sum of number of event types endorsed, and total number of encounters were used.

Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997). The ERC is a parent-report questionnaire containing 24 items rated on a 4-point Likert scale from 1 ('Almost always') to 4 ('Almost never'). The instrument was developed to measure self-regulation and emotionality in school-aged children. The authors purport the measure to be appropriate for children 6-12 years, distinguishing between dysregulated and well-regulated children, and distinguishing between maltreated and non-maltreated children (Shields & Cicchetti, 1997). Two subscales have been identified: (1) Emotion Regulation (ER; 8 items) measuring displays of situationally appropriate affect, emotional self-awareness, empathy, and emotion understanding, and (2) Lability/Negativity (L/N; 15 items) measuring affect flexibility, mood lability, reactivity,

emotional intensity, and arousal (Shields & Cicchetti, 1997). The ERC possesses high internal consistency, with a Cronbach's alpha of .83 for the ER subscale, and .96 for the L/N subscale (Shields & Cicchetti, 1997). Construct validity and discriminant validity have been demonstrated (Lunkenheimer et al., 2007; Shields & Cicchetti, 2001). For the current study, the ER subscale and the L/N subscale were used.

Child Behaviour Checklist for Ages 6-18 (CBCL; Achenbach & Rescorla, 2001). The CBCL is a parent-report questionnaire containing 113 items rated on a 3-point Likert scale, from 0 ("Not true") to 2 ("Very true or Often true"). The CBCL was developed to assess a wide range of child symptoms, including behavioural, somatic, and thought problems. In youth assessment, the CBCL is one of the most widely used parent-report measures of symptoms (Nakamura et al., 2009). The CBCL is widely used by clinicians and researchers, and has been found to distinguish between referred and non-referred populations (Achenbach, 1991). The instrument produces a range of scores, including three global scales (externalising behaviours, internalising behaviours, total problem behaviours), six DSM-oriented subscales, and eight empirically derived syndrome scale scores (Achenbach & Rescorla, 2001). Scale scores are classified as belonging to one of three ranges: (1) normal, (2) borderline, or (3) clinical. Extensive normative data for children aged 6 to 18, standardised scores, and clinical cut-offs are available (Achenbach et al., 2003). Five of the syndrome scales were used in the current study, (1) anxious/depressed, (2) withdrawn/depressed, (3) attention problems, (4) rule-breaking behaviour, and (5) aggressive behaviour. Achenbach and colleagues (2003) reported that the syndrome scales possess excellent psychometric properties, including a high level of internal consistency (Cronbach's alpha's = .76 - .85, overall mean Cronbach's alpha = .80), test-retest reliability (Pearson r 's = .79 - .89, overall mean Pearson r = .83).

7.1.3 Procedure.

Ethical clearance to conduct the study was provided by the Curtin Human Research Ethics Committee and the Western Australian Department of Education (see Appendix B).

The questionnaire pack included an information sheet for parents (see Appendix D), detailing the voluntary nature of the study, and the nature of the desired respondents, namely, mothers reporting on behalf of one of their children (aged between 5 and 12 years). A consent form (see Appendix D) to be signed prior to completion of the

questionnaires was also included. Mothers had the option of including their name and contact address or remaining anonymous. Mothers who chose to participate returned the completed measures to the researchers via an included reply-paid envelope. Completing the questionnaire pack was estimated to take approximately 20 minutes. Mothers who opted to include a contact address were mailed a \$10 grocery voucher to compensate them for their time.

Returned questionnaires were coded with an ID number. Questionnaires were scored by a researcher and input into an electronic database for analyses. No identifying information was included in the electronic database.

7.1.4 Statistical analysis.

Scored questionnaire data were entered into an electronic database. There were no missing data, as incomplete questionnaire packs were excluded from analyses. The 12 variables considered for inclusion in the subsequent structural model are reported in Table 7.5.

Table 7.5.

Variables Considered for Inclusion in the Structural Model

Measure	Abbreviation	No. Items	Maternal/Child Factor
PRFQ			
Reflective functioning	RF	31	Maternal
MESQ			
Emotion coaching	EC	7	Maternal
Emotion dismissing	ED	7	Maternal
LITE-P			
Child trauma exposure	CTE	16	Child
ERC			
Emotion regulation	ER	8	Child
Affect lability/negativity	LN	15	Child
PROPS			
Post traumatic symptoms	PTS	32	Child
CBCL			
Anxious/depressed	ANX	13	Child
Withdrawn/depressed	WID	8	Child
Attention problems	ATT	10	Child
Rule-breaking behaviour	RBB	17	Child
Aggressive behaviour	AGG	18	Child

A series of confirmatory factor analyses, implemented through LISREL 8.8, were conducted to determine how well the present data fit the factor structures implied in Table 7.5. Multi-factor models associated with the MESQ, ERC, and CBCL were each compared to a corresponding one-factor model. There were no other plausible factor

models to test. The RBB subscale of the CBCL contained four items (Item 72: Sets fires; Item 99: Smokes, chews, or sniffs tobacco; Item 101: Truancy, skips school; Item 105: Uses drugs for non-medical purposes) that showed zero variance. In each case, these items had not been endorsed by any of the respondents. These items were subsequently removed from the scale, reducing its number of items to 13. The factor solution would not converge with the 13-item RBB scale included in the analysis. The RBB scale was therefore removed from further analyses, and a four-factor CBCL model was tested. To determine how well each of the nine tested models fit the data, a range of fit indices were computed (see Table 7.6).

Table 7.6.

Confirmatory Factor Analyses for Measures with Subscales Included in Analyses

Factor models	χ^2	df	χ^2/df	CFI	NNFI	SRMR	RMSEA (90% CI)	AIC
PRFQ								
1-factor	3374.62	434	7.78	.660	.630	.130	.150 (.140 - .150)	3498.62
LITE-P								
1-factor	192.31	104	1.85	.86	.83	.057	.052 (.040 - .063)	256.31
PROPS								
1-factor	760.17	464	1.64	.96	.96	.057	.045 (.039 - .051)	888.17
CBCL								
4-factors	2784.80	1121	2.48	.893	.888	.076	.069 (.066 - .072)	2992.80
1-factor	3934.43	1127	3.49	.858	.852	.081	.089 (.086 - .092)	4130.43
ERC								
2-factors	958.82	229	4.19	.842	.825	.105	.101 (.094 - .108)	1052.82
1-factor	1384.90	230	6.02	.799	.779	.105	.127 (.120 - .133)	1476.90
MESQ								
2-factors	308.09	76	4.05	.848	.818	.085	.098 (.087 - .110)	366.09
1-factor	526.97	77	6.84	.757	.713	.103	.137 (.126 - .148)	582.98

Note. CFI = comparative fit index, NNFI = non-normed fit index, SRMR = standardised root mean square residual, RMSEA = root mean square error of approximation, AIC = Akaike's Information Criterion

Normed chi-square represents a basic index of model fit, and is derived by dividing chi-square by the model's degrees of freedom. A normed chi-square value less than three is indicative of good fit (Klein, 2005). *Comparative fit index* (CFI) compares the null model, in which all factors are assumed to be uncorrelated, to the hypothesised model (Hooper, Coughlan, & Mullen, 2008). The suggested criterion for good fit is a CFI value greater than or equal to .9 (Benet-Martnez & Karakitapoglu-Aygun, 2003; Tabachnick & Fidell, 2007). *Non-normed fit index* (NNFI) compares the chi-square values of the null and the hypothesised model (Hooper et al., 2008). An NNFI value greater than or equal to .9 indicates good fit (Benet-Martnez & Karakitapoglu-Aygun, 2003; Tabachnick & Fidell, 2007). The *standardised root mean square residual* (SRMR) measures the square root difference between the residuals of the null model and the hypothesised model, and is considered to be one of the more meaningful fit

indices to report in a confirmatory factor analysis (Hooper et al., 2008). An SRMR value of less than or equal to 0.1 indicates a good fit (Marsh, Hau, & Wen, 2004). The *root mean square error of approximation* (RMSEA) is considered an important fit index, as it takes into account the number of parameters in the hypothesised models and selects the most parsimonious model to analyse (Hooper et al., 2008). A RMSEA value of less than or equal to .08 on this index (or 90% confidence interval that encompasses this value) indicates good fit (Benet-Martnez & Karakitapoglu-Aygun, 2003; Hu & Bentler, 1999). *Akaike's Information Criterion* (AIC) is a parsimony fit index that uses information criteria to derive fit statistics (Hooper et al., 2008). The AIC is appropriate for comparing the fit of non-nested models. The model with the smaller AIC value provides the better fit (Hooper et al., 2008).

According to the normed chi-square, CFI, NNFI, SRMR, and RMSEA cut-offs, all the confirmatory factor analysis models (with the exception of the PROPS, 1-factor solution) failed to reach the required threshold. However, when multi- and uni-factorial models were compared for the MESQ, ERC, and CBCL, the multi-factorial model provided the better fit in each instance. The superiority of the multi-factorial model over its uni-factorial counterpart was confirmed with a series of chi-square difference tests. For the MESQ, *chi-square difference* = 221.88, *df* = 1, *p* < .001. For the ERC, *chi-square difference* = 426.08, *df* = 6, *p* < .001. For the CBCL, *chi-square difference* = 1149.63, *df* = 1, *p* < .001. AIC values were smaller for the multi-factor model than their uni-factor counterpart in each instance. In the absence of other plausible factor solutions, the 1-factor PRFQ, LITE-P, and PROPS, the 2-factor ERC and MESQ, and the 4-factor CBCL were used to derive the 11 indicators for the structural model.

Internal consistency reliabilities for the indicators were measured by Cronbach's alpha: RF (.66), CTE (.62), PTS (.89), EC (.68), ED (.47), ER (.67), LN (.76), ANX (.79), WID (.52), ATT (.73), and AGG (.86). For scales with 10 or more items (RF, CTE, PTS, LN, ANX, ATT, and AGG), a Cronbach's alpha of 0.7 or more indicates good internal consistency (Tabachnick & Fidell, 2007). For scales with less than 10 items (EC, ED, ER, and WID), a Cronbach's alpha of approximately 0.6 is considered adequate (Loewenthal, 2001). Four indicators fell short of these cut-offs (RF, CTE, ED, and WID).

7.2 Results

7.2.1 Descriptive statistics.

Descriptive statistics for the 11 variables were computed using SPSS (Version 22 IBM Australia, Sydney, NSW, Australia). Statistics are reported for the maternal factors (RF, EC, and ED) first, then for the child factors (CTE, ER, LN, PTS, ANX, WID, ATT, and AGG).

7.2.1.1 Maternal factors.

Descriptive statistics for the three maternal variables (RF, EC, and ED), broken down by gender and SES sub-groups, are reported in Table 7.7. Independent-samples *t*-tests revealed no significant between-group gender-based differences for the RF, EC, or ED variable. One-way ANOVAs revealed no significant between-group SES category-based differences for the RF, EC, or ED variable.

Table 7.7

Maternal Factors by Gender and SES Sub-Groups

Variable		Overall (<i>N</i> = 314)	Gender (Child)		SES		
			Male (<i>n</i> = 163)	Female (<i>n</i> = 151)	Low (<i>n</i> = 22)	Mid (<i>n</i> = 139)	High (<i>n</i> = 153)
RF	<i>M</i> (<i>SD</i>)	5.17 (0.46)	5.16 (0.44)	5.18 (0.48)	5.13 (0.37)	5.12 (0.49)	5.22 (0.43)
	<i>Range</i>	3.77 - 6.32	3.77 - 6.29	3.90 - 6.32	4.55 - 5.94	3.90 - 6.29	3.77 - 6.32
EC	<i>M</i> (<i>SD</i>)	26.55 (3.50)	26.65 (3.48)	26.44 (3.54)	26.95 (3.29)	26.94 (3.80)	26.13 (3.21)
	<i>Range</i>	18 - 35	19 - 35	18 - 35	21 - 33	19 - 35	18 - 35
ED	<i>M</i> (<i>SD</i>)	24.59 (4.44)	24.67 (4.40)	24.50 (4.48)	25.32 (4.06)	25.09 (4.67)	24.03 (4.22)
	<i>Range</i>	12 - 35	12 - 35	12 - 35	17 - 34	12 - 35	14 - 35

7.2.1.2 Child factors.

Descriptive statistics for the nine child variables (Child trauma types [CTT], CTE, ER, LN, PTS, ANX, WID, ATT, AGG), broken down by gender, SES, CTE, and PTS sub-groups, are reported in Table 7.8. Independent-samples *t*-tests were conducted comparing gender, SES, CTE, and PTS subgroups, respectively. On average, boys were reported as having a significantly higher level of attention problems than girls, $t(312) = 2.27, p < .05$. On average, low SES children were reported as having been exposed to a significantly greater number of types of traumatic experiences, $t(22.83) = 2.54, p < .05$, a significantly greater number of traumatic experiences in total, $t(22.81) = 2.78, p < .05$, and significantly fewer symptoms of anxiety/depression, $t(31.72) = 3.16, p < .01$.

Table 7.8

Child Factors by Gender, SES, Child Trauma Exposure, and Post-Traumatic Symptoms Sub-Groups

Subscale	Overall (N = 314)	Gender		SES		CTE		PTS	
		Male (n = 163)	Female (n = 151)	Low (n = 22)	Mid/High (n = 292)	Low (n = 242)	High (n = 72)	Normal (n = 230)	Clinical (n = 84)
CTT									
M	3.13	3.20	3.07	4.64	3.02*	2.28	6.01***	2.75	4.18***
(SD)	(2.29)	(2.23)	(2.35)	(2.92)	(2.20)	(1.49)	(2.16)	(2.07)	(2.54)
Range	0 - 11	0 - 11	0 - 11	0 - 11	0 - 11	0 - 7	1 - 11	0 - 11	0 - 11
CTE									
M	5.10	5.35	4.84	8.64	4.84*	2.88	12.60***	4.40	7.04***
(SD)	(4.91)	(5.09)	(4.71)	(6.28)	(4.70)	(1.91)	(4.48)	(4.46)	(5.56)
Range	0 - 33	0 - 33	0 - 26	0 - 24	0 - 33	0 - 7	8 - 33	0 - 33	0 - 26
ER									
M	26.65	26.82	26.46	26.82	26.63	26.58	26.86	27.26	24.98***
(SD)	(3.19)	(3.12)	(3.26)	(3.82)	(3.15)	(3.21)	(3.12)	(3.06)	(2.96)
Range	18 - 32	18 - 32	18 - 32	20 - 32	18 - 32	18 - 32	18 - 32	18 - 32	18 - 32
LN									
M	28.71	28.52	28.91	28.36	28.74	28.50	29.43	26.94	33.56***
(SD)	(5.57)	(5.56)	(5.59)	(6.44)	(5.51)	(5.44)	(5.95)	(4.50)	(5.34)
Range	17 - 47	18 - 47	17 - 45	18 - 40	17 - 47	18 - 47	17 - 44	17 - 42	20 - 47
PTS									
M	11.53	11.62	11.43	10.73	11.59	10.51	14.96***	7.64	22.17***
(SD)	(8.03)	(7.83)	(8.27)	(6.34)	(8.15)	(7.74)	(8.09)	(4.34)	(5.90)
Range	0 - 43	0 - 43	0 - 37	0 - 24	0 - 43	0 - 43	0 - 37	0 - 24	16 - 43
Anx/Depr									
M	2.94	3.01	2.86	1.68	3.03**	2.58	4.15***	1.93	5.71***
(SD)	(3.11)	(3.26)	(2.95)	(1.81)	(3.17)	(2.99)	(3.23)	(2.07)	(3.75)
Range	0 - 16	0 - 13	0 - 16	0 - 6	0 - 16	0 - 16	0 - 13	0 - 9	0 - 16
Withd/Depr									
M	1.09	1.12	1.07	1.00	1.10	1.02	1.33	0.68	2.23***
(SD)	(1.46)	(1.49)	(1.43)	(1.51)	(1.46)	(1.46)	(1.44)	(0.99)	(1.88)
Range	0 - 7	0 - 7	0 - 6	0 - 5	0 - 7	0 - 7	0 - 6	0 - 4	0 - 7
Attention									
M	3.14	3.51	2.74*	3.68	3.10	3.13	3.17	2.25	5.56***
(SD)	(3.04)	(3.19)	(2.82)	(3.11)	(3.04)	(3.13)	(2.75)	(2.25)	(3.58)
Range	0 - 13	0 - 13	0 - 13	0 - 12	0 - 13	0 - 13	0 - 12	0 - 11	0 - 13
Aggression									
M	4.43	4.41	4.45	4.64	4.41	3.96	6.00***	2.64	9.33***
(SD)	(4.65)	(4.44)	(4.88)	(4.30)	(4.68)	(4.39)	(5.13)	(2.91)	(4.98)
Range	0 - 23	0 - 19	0 - 23	0 - 16	0 - 23	0 - 23	0 - 23	0 - 14	0 - 23

* $p < .05$, ** $p < .01$, *** $p < .001$

Children falling within the upper quartile of the CTE variable were demarcated as the high-exposure group ($n = 72$, $range = 8 - 33$). The low exposure group ($n = 242$, $range = 0 - 7$), comprised the lower three quartiles. Relative to the low trauma exposure group, the high trauma exposure group had been exposed to a significantly higher number of trauma types, $t(91.9) = 13.75$, $p < .001$, and discrete experiences of trauma, $t(78.82) = 17.9$, $p < .001$. They also exhibited significantly higher levels of post-traumatic symptoms, $t(312) = 4.24$, $p < .001$, anxious/depressed symptoms, $t(312) = 3.85$, $p < .001$, and aggressive behaviours, $t(312) = 3.32$, $p < .001$.

On average, the clinical group on the PTS scale had been exposed to a significantly higher number of trauma types, $t(125.21) = 4.62$, $p < .001$, and discrete trauma experiences, $t(124) = 3.91$, $p < .001$. They were reported as exhibiting poorer

Table 7.10 reports the frequencies and percentages of post-traumatic symptoms experienced by children included in the sample. Only PTS items endorsed as 'Very true or often true' were included. Overall, 'Repeats the same game or activity', 'Argues', and 'Worries' were the most prevalent symptoms, affecting 15.6%, 15.6%, and 9.7% of children, respectively. The item 'Is withdrawn' was not endorsed at this level by any parents.

Table 7.10

Frequencies of Post-Trauma Symptoms by Gender, CTE, and AGG Sub-Groups

Variable	Overall (N = 314) Freq. (%)	Gender		CTE		AGG	
		Male (n = 163) Freq. (%)	Female (n = 151) Freq. (%)	Low (n = 242) Freq. (%)	High (n = 72) Freq. (%)	Normal (n = 285) Freq. (%)	Raised (n = 29) Freq. (%)
PTS endorsed items							
Concentrating	29 (9.2)	20 (12.3)	9 (6.0)	21 (8.7)	8 (11.1)	22 (7.7)	7 (24.1)
Mood swings	23 (7.3)	8 (4.9)	15 (9.9)	17 (7.0)	6 (8.3)	11 (3.9)	12 (41.4)
Bad memories	16 (5.1)	8 (4.9)	8 (5.3)	9 (3.7)	7 (9.7)	13 (4.6)	3 (10.3)
Spaces out	5 (1.6)	4 (2.5)	1 (0.7)	3 (1.2)	2 (2.8)	5 (1.8)	0 (0.0)
Too guilty	6 (1.9)	5 (3.1)	1 (0.7)	4 (1.7)	2 (2.8)	6 (2.1)	0 (0.0)
Anxious	24 (7.6)	14 (8.6)	10 (6.6)	16 (6.6)	8 (11.1)	19 (6.7)	5 (17.2)
Irrational fears	11 (3.5)	8 (4.9)	3 (2.0)	6 (2.5)	5 (6.9)	7 (2.5)	4 (13.8)
Repeats	49 (15.6)	27 (16.6)	22 (14.6)	37 (15.3)	12 (16.7)	45 (15.8)	4 (13.8)
Clingy	8 (2.5)	5 (3.1)	3 (2.0)	7 (2.9)	1 (1.4)	4 (1.4)	4 (13.8)
Avoid interests	3 (1.0)	2 (1.2)	1 (0.7)	2 (0.8)	1 (1.4)	1 (0.4)	2 (6.9)
Fights	10 (3.2)	6 (3.7)	4 (2.6)	5 (2.1)	5 (6.9)	3 (1.1)	7 (24.1)
Bossy	22 (7.0)	11 (6.7)	11 (7.3)	18 (7.4)	4 (5.6)	14 (4.9)	8 (27.6)
Sad/depressed	2 (0.6)	1 (0.6)	1 (0.7)	1 (0.4)	1 (1.4)	1 (0.4)	1 (3.4)
Hyper-alert	10 (3.2)	5 (3.1)	5 (3.3)	8 (3.3)	2 (2.8)	4 (1.4)	6 (20.7)
Picked on	18 (5.7)	12 (7.4)	6 (4.0)	10 (4.1)	8 (11.1)	14 (4.9)	4 (13.8)
In trouble	11 (3.5)	6 (3.7)	5 (3.3)	4 (1.7)	7 (9.7)	4 (1.4)	7 (24.1)
Worries	30 (9.6)	17 (10.4)	13 (8.6)	18 (7.4)	12 (16.7)	22 (7.7)	8 (27.6)
Fearful	10 (3.2)	8 (4.9)	2 (1.3)	5 (2.1)	5 (6.9)	7 (2.5)	3 (10.3)
Withdrawn	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Nervous	11 (3.5)	7 (4.3)	4 (2.6)	7 (2.9)	4 (5.6)	8 (2.8)	3 (10.3)
Startles	6 (1.9)	3 (1.8)	3 (2.0)	5 (2.1)	1 (1.4)	2 (0.7)	4 (13.8)
Irritable	8 (2.5)	4 (2.5)	4 (2.6)	6 (2.5)	2 (2.8)	3 (1.1)	5 (17.2)
Quick temper	23 (7.3)	13 (8.0)	10 (6.6)	15 (6.2)	8 (11.1)	9 (3.2)	14 (48.3)
Argues	49 (15.6)	25 (15.3)	24 (15.9)	29 (12.0)	20 (27.8)	24 (8.4)	25 (86.2)
Secretive	10 (3.2)	3 (1.8)	7 (4.6)	6 (2.5)	4 (5.6)	6 (2.1)	4 (13.8)
Doesn't care	3 (1.0)	1 (0.6)	2 (1.3)	2 (0.8)	1 (1.4)	1 (0.4)	2 (6.9)
Sleeping	11 (3.5)	6 (3.7)	5 (3.3)	8 (3.3)	3 (4.2)	5 (1.8)	6 (20.7)
Nightmares	6 (1.9)	3 (1.8)	3 (2.0)	2 (0.8)	4 (5.6)	2 (0.7)	4 (13.8)
Wets bed	4 (1.3)	3 (1.8)	1 (0.7)	3 (1.2)	1 (1.4)	1 (0.4)	3 (10.3)
Eating	9 (2.9)	5 (3.1)	4 (2.6)	5 (2.1)	4 (5.6)	6 (2.1)	3 (10.3)
Stomach	7 (2.2)	3 (1.8)	4 (2.6)	4 (1.7)	3 (4.2)	4 (1.4)	3 (10.3)
Headaches	6 (1.9)	3 (1.8)	3 (2.0)	4 (1.7)	2 (2.8)	3 (1.1)	3 (10.3)
PTS Total score							
Normal range	230 (73.2)	119 (73.0)	111 (73.5)	189 (78.1)	41 (56.9)	226 (79.3)	4 (13.8)
Clinical range	84 (26.8)	44 (27.0)	40 (26.5)	53 (21.9)	31 (43.1)	59 (20.7)	25 (86.2)

Table 7.11 reports the frequencies and percentages of children categorised as within the normal, borderline, or clinical range for each CBCL subscale included in the analyses. Overall, the majority of children fell within the normal range, ranging from 89.5% for anxious/depressed to 94.9% for attention problems.

Table 7.11

Frequencies of CBCL Sub-Scale Categorisation by Gender, Child Trauma Exposure, Post-Traumatic Stress, and Aggression Sub-Groups

Subscale	Overall (N = 314) Freq. (%)	Gender (Child)		CTE		PTS		AGG	
		Male (n = 163) Freq. (%)	Female (n = 151) Freq. (%)	Low (n = 242) Freq. (%)	High (n = 72) Freq. (%)	Normal (n = 230) Freq. (%)	Clinical (n = 84) Freq. (%)	Normal (n = 285) Freq. (%)	Raised (n = 29) Freq. (%)
ANX									
Norm	281(89.5)	142(87.1)	139(92.1)	221(91.3)	60 (83.3)	226(98.3)	55 (65.5)	264(92.6)	17 (58.6)
Border	24 (7.6)	16 (9.8)	8 (5.3)	15 (6.2)	9 (12.5)	4 (1.7)	20 (23.8)	15 (5.3)	9 (31.0)
Clin	9 (2.9)	5 (3.1)	4 (2.6)	6 (2.5)	3 (4.2)	0 (0.0)	9 (10.7)	6 (2.1)	3 (10.3)
WID									
Norm	296(94.3)	149(91.4)	147(97.4)	228(94.2)	68 (94.4)	226(98.3)	70 (83.3)	272(95.4)	24 (82.8)
Border	13 (4.1)	9 (5.5)	4 (2.6)	10 (4.1)	3 (4.2)	4 (1.7)	9 (10.7)	9 (3.2)	4 (13.8)
Clin	5 (1.6)	5 (3.1)	0 (0.0)	4 (1.7)	1 (1.4)	0 (0.0)	5 (6.0)	4 (1.4)	1 (3.4)
ATT									
Norm	298(94.9)	153(93.9)	145(96.0)	229(94.6)	69 (95.8)	229(99.6)	69 (82.1)	276(96.8)	22 (75.9)
Border	10 (3.2)	8 (4.9)	2 (1.3)	7 (2.9)	3 (4.2)	1 (0.4)	9 (10.7)	7 (2.5)	3 (10.3)
Clin	6 (1.9)	2 (1.2)	4 (2.6)	6 (2.5)	0 (0.0)	0 (0.0)	6 (7.1)	2 (0.7)	4 (13.8)
AGG									
Norm	285(90.8)	148(90.8)	137(90.7)	223(92.1)	62 (86.1)	226(98.3)	59 (70.2)	285(100)	-
Border	21 (6.7)	12 (7.4)	9 (6.0)	15 (6.2)	6 (8.3)	4 (1.7)	17 (20.2)	-	21 (72.4)
Clin	8 (2.5)	3 (1.8)	5 (3.3)	4 (1.7)	4 (5.6)	0 (0.0)	8 (9.5)	-	8 (27.6)

7.2.2 Bi-variate correlational analyses.

SPSS Version 22 (Version 22 IBM Australia, Sydney, NSW, Australia) was used to compute Pearson correlations among the 11 indicators (see Table 7.12). Significant, weak (Jackson, 2006) positive relationships emerged between EC and RF, EC and ED, EC and ER, RF and ER, CTE and RF, CTE and PTS, CTE and ANX, and CTE and AGG. Significant, moderate (Jackson, 2006) positive relationships emerged between PTS and LN, PTS and ANX, PTS and WID, PTS and ATT, LN and ANX, LN and WID, LN and ATT, ANX and WID, ANX and ATT, ANX and AGG, WID and ATT, WID and AGG, ATT and AGG. Significant, strong (Jackson, 2006) positive relationships emerged between PTS and AGG, and LN and AGG (see Table 7.12).

Significant weak (Jackson, 2006) negative relationships emerged between ED and RF, ED and ER, RF and ATT, ER and ANX, and ER and ATT. Significant moderate (Jackson, 2006) negative relationships emerged between PTS and ER, ER and LN, ER and WID, and ER and AGG (see Table 7.12).

Table 7.12

Bivariate (Pearson) Correlations Among Indicator Variables (n = 314)

Variable	RF	EC	ED	CTE	PTS	ER	LN	ANX	WID	ATT	AGG
RF	1.000										
EC	.151**	1.000									
ED	-.236**	.265**	1.000								
CTE	.118*	-.062	-.109	1.000							
PTS	.044	.032	-.029	.270**	1.000						
ER	.284**	.122*	-.143*	.070	-.386**	1.000					
LN	-.100	.066	.064	.085	.697**	-.449**	1.000				
ANX	.091	.015	-.044	.190**	.677**	-.271**	.414**	1.000			
WID	-.033	-.084	-.033	.101	.582**	-.355**	.382**	.582**	1.000		
ATT	-.120*	-.090	.008	.060	.590**	-.242**	.480**	.398**	.423**	1.000	
AGG	-.071	-.061	.015	.218**	.762**	-.373**	.724**	.535**	.501**	.521**	1.000

* $p < .05$ (two-tailed), ** $p < .01$ (two-tailed)

7.2.3 Testing the moderation effects.

Generalised linear mixed (GENLINMIXED) models, as implemented through SPSS (Version 22 IBM Australia, Sydney, NSW, Australia), were employed to test for moderation effects. The GENLINMIXED procedure extends linear models permitting the testing of target variables with non-normal distributions, and independent variables that are correlated. Nine significant moderation effects were found.

SES moderated the relationship between child trauma symptoms and emotion regulation, as indicated by a significant interaction between PTS and SES, $F(2, 308) = 3.170$, $p = .043$. Simple main effects tests revealed that the relationship between PTS and ER was significant and negative for all three SES groups (see Table 7.13). Overlapping confidence intervals prevented a clear interpretation of the interaction. After converting the t -values to eta-squared, it appeared that the relationship was strongest in the low SES group.

SES moderated the relationship between child trauma symptoms and affect lability/negativity, as indicated by a significant interaction between PTS and SES, $F(2,308) = 3.272$, $p = .039$. Simple main effects tests revealed that the relationship between PTS and LN was significant and positive for all three SES groups (see Table 7.14). Overlapping confidence intervals prevented a clear interpretation of the interaction. After converting the t -values to eta-squared, it appeared that the relationship was strongest in the low SES group.

SES moderated the relationship between maternal emotion coaching and attention problems, as indicated by a significant interaction between EC and SES, $F(2,308) = 6.402, p = .002$. Simple main effects tests revealed that the relationship between maternal emotion coaching and attention problems was significant and negative for the low SES group. For children in the middle and high SES groups, however, the relationship was non-significant (see Table 7.15).

SES moderated the relationship between maternal emotion coaching and child trauma symptoms as indicated by a significant interaction between EC and SES, $F(2,308) = 3.101, p = .046$. Simple main effects tests revealed that the relationship between EC and PTS was non-significant for all SES groups (see Table 7.16). After converting the t -values to eta-squared, it appeared that the relationship was strongest in the low SES group.

SES moderated the relationship between maternal emotion coaching and affect lability/negativity, as indicated by a significant interaction between emotion coaching and SES, $F(2,308) = 4.169, p = .016$. Simple main effects tests revealed that the relationship between EC and LN was significant and negative for the low SES group. Non-significant effects were found for the middle and high SES groups (see Table 7.17).

SES moderated the relationship between maternal reflective functioning and child trauma symptoms as indicated by a significant interaction between RF and SES, $F(2,308) = 4.342, p = .014$. Simple main effects tests revealed that the relationship between RF and PTS was significant and negative for the low SES group. Non-significant effects were found for the middle and high SES groups (see Table 7.18).

SES moderated the relationship between maternal reflective functioning and emotion regulation, as indicated by a significant interaction between RF and SES, $F(2,308) = 3.311, p = .038$. Simple main effects tests revealed that the relationship between RF and ER was significant and positive for the low and middle SES groups. A non-significant effect was found for the high SES group (see Table 7.19).

SES moderated the relationship between maternal reflective functioning and affect lability/negativity, as indicated by a significant interaction between RF and SES, $F(2,308) = 3.276, p = .039$. Simple main effects tests revealed that the relationship

between RF and LN was significant and negative for the low and middle SES groups. A non-significant effect was found for the high SES group (see Table 7.20).

Maternal emotion coaching moderated the relationship between child trauma exposure and emotion regulation, as indicated by a significant interaction between CTE and ER, $F(1,310) = 7.404, p = .007$. Low and high maternal emotion coaching groups were formed by conducting a median split on the EC variable data (low, $n = 155$; high, $n = 159$). Simple main effects tests analyses revealed that child trauma exposure and emotion regulation were significantly and positively related for the high maternal emotion coaching group. A non-significant effect was found for children in the low maternal emotion coaching group (see Table 7.21).

Table 7.13

Relationship Between PTS and ER Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	-.366	20	-4.07	< .001	-.554, -.178
Med	-.128	137	-4.40	< .001	-.186, -.071
High	-.156	151	-5.32	< .001	-.213, -.098

Table 7.14

Relationship Between PTS and LN Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	.762	20	6.220	< .001	.506, 1.017
Mid	.444	137	12.640	< .001	.374, .513
High	.498	151	12.520	< .001	.419, .576

Table 7.15

Relationship Between EC and ATT Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	-.499	20	-4.418	< .001	-.735, -.264
Mid	-.055	137	-.914	.362	-.173, .064
High	-.071	151	-.888	.376	-.229, .087

Table 7.16

Relationship Between EC and PTS Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	-.618	20	-1.775	.091	-1.344, .108
Mid	.318	137	1.506	.134	-.099, .735
High	-.187	151	-.966	.336	-.569, .195

Table 7.17

Relationship Between EC and LN Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	-.858	20	-2.798	.011	-1.497, -.218
Mid	.000	137	-.002	.998	-.283, .282
High	.112	151	.791	.430	-.168, .392

Table 7.18

Relationship Between RF and PTS Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	-5.307	20	-2.554	.019	-9.643, -.972
Mid	.267	137	.161	.872	-3.010, 3.544
High	2.370	151	1.477	.142	-.799, 5.540

Table 7.19

Relationship Between RF and ER Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	5.454	20	2.828	.010	1.431, 9.477
Mid	2.439	137	4.382	< .001	1.338, 3.539
High	.959	151	1.545	.124	-.267, 2.185

Table 7.20

Relationship Between RF and LN Across SES Groups

SES Group	<i>B</i>	df	<i>t</i>	<i>p</i>	95% CI
Low	-6.531	20	-2.263	.035	-12.551, -.512
Mid	-2.104	137	-2.160	.033	-4.030, -.178
High	.605	151	.512	.610	-1.733, 2.944

Table 7.21

Relationship Between CTE and ER Across Maternal EC Groups

EC Group	<i>B</i>	<i>df</i>	<i>t</i>	<i>p</i>	95% CI
Low	-.069	153	-1.164	.246	-.186, .048
High	.162	157	3.467	.001	.070, .255

The interaction between maternal emotion coaching and child trauma exposure was included in the subsequent structural model. Statistical power considerations contraindicated the inclusion of the eight interactions involving SES.

7.2.4 Structural equation modelling.

The structural model proposed in Figure 6.1 was modified to reflect the results of the previous analyses. The modified structural model is depicted in Figure 7.1. Model pathways reflect the significant correlations among the indicators (see Table 7.12).

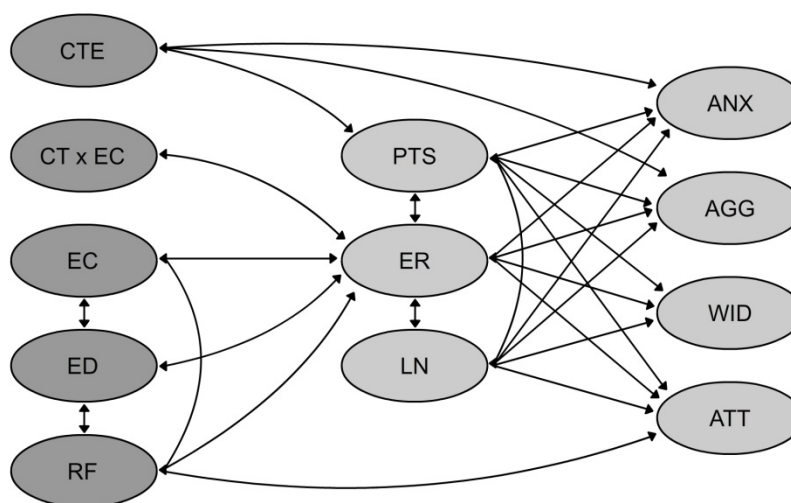


Figure 7.1. Modified structural model with pathways depicting the significant correlations among child trauma exposure, maternal factors, and child outcomes.

7.2.4.1 Assumption testing.

Prior to analyses, the data were tested for compliance with a number of statistical assumptions underlying structural equation modelling, namely, linearity, an absence of multicollinearity, and multivariate normality (Kline, 2005). SPSS (Version 22 IBM Australia, Sydney, NSW, Australia) was used to produce scatterplots of the bivariate relationships among the 11 indicator variables (RF, CTE, PTS, EC, ED, ER, LN, ANX, WID, ATT, and AGG). Visual inspection of the scatterplots indicated that the assumption of linearity was met. Tolerance values for each of the model variables were above 0.1, indicating an absence of multicollinearity (Bowerman & O'Connell, 1990). LISREL Version 8.8 was used to test for multivariate normality. The assumption was violated. In these circumstances, Joreskog and Sorbom (1989) recommend testing model fit with a chi-square statistic that corrects for the inflation. Accordingly, the Satorra-Bentler chi-square was used to derive all fit statistics. Fit statistics used for the previous confirmatory factor analyses (normed chi-square, CFI, NNFI, SRMR, and the RMSEA) were used to test the fit of the structural model.

7.2.4.2 Incorporating measurement error into the structural model.

The ovals in Figure 7.1 represent the constructs that were intended to be captured by the indicator variables. In Figure 7.2, each latent variable was augmented with its corresponding indicator variable (the 11 variables measured in the present study, represented by boxes). Each indicator was an imperfect measure of the latent variable (psychological construct) that derived it. Including both latent and indicator variables in the structural model allowed measurement error to be accounted for.

The tested model included a single indicator for each latent variable, which precluded LISREL from being able to estimate the measurement errors for the model ($\delta_1 - \delta_5$, and $\varepsilon_1 - \varepsilon_7$; see Figure 7.2). Values were manually calculated then input by setting the measurement error associated with each observed variable to one minus its reliability coefficient, and factor loadings to the square root of the reliability coefficient for each observed variable (see Goodwin & Plaza, 2000).

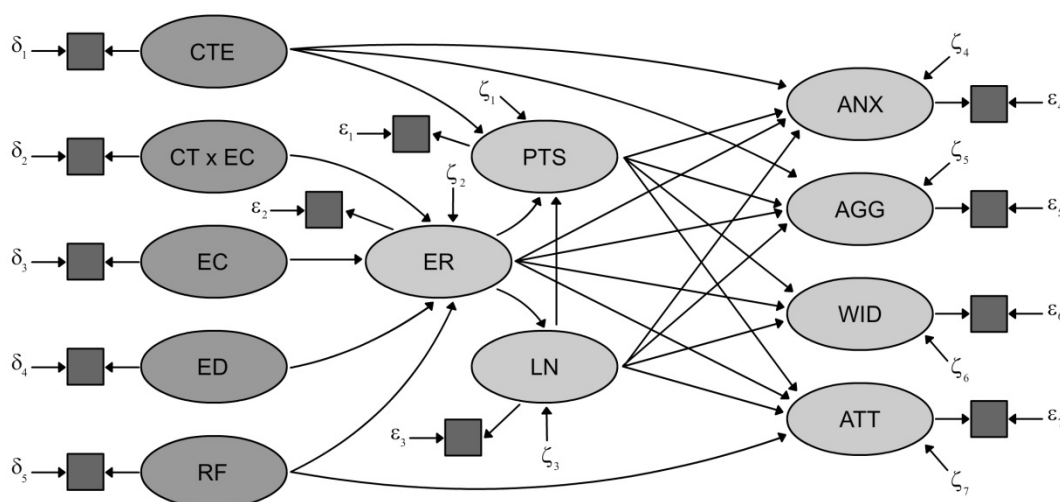


Figure 7.2. Structural model with its measurement component.

7.2.4.3 Estimating an adequate sample size.

In order to reliably test the model depicted in Figure 7.2, it has been recommended to include at least 5 participants for each *free* parameter in the measurement model, with 20 participants per free parameter representing the ideal ratio (Kline, 2005). Free parameters are parameters that must be estimated from the sample data. For the current model, input measurement errors and factor loadings were *fixed* parameters. The path coefficients (22 parameters), disturbances for the endogenous variables (7 parameters: $\zeta_1 - \zeta_7$), variances for the endogenous variables (5 parameters: CTE, CTxEC, EC, ED, and RF), and the bivariate correlations among the exogenous variables (10 parameters) were *free* parameters. The minimum sample size for testing the present model was therefore calculated to be 220 (44 x 5). The included sample size of 314 exceeded this minimum requirement.

7.2.4.4 Testing the structural model.

The fit statistics that were used for the previous confirmatory factor analyses (normed chi-square, CFI, NNFI, SRMR, and RMSEA) were used to test the fit of the structural model. The model met the criterion of good fit on each of the five fit statistics (see Table 22). To derive a more parsimonious model, the significance of each pathway was tested. Non-significant pathways were dropped from the model. The reduced model, with path coefficients, is depicted in Figure 7.3. Path significance values were

as follows: ER-LN ($p = .000$), CTxEC-ER ($p = .031$), RF-ER ($p = .000$), CTE-PTS ($p = .000$), LN-PTS ($p = .000$), PTS-ANX ($p = .000$), LN-ANX ($p = .000$), PTS-WID ($p = .000$), ER-WID ($p = .000$), LN-WID ($p = .001$), RF-ATTN ($p = .014$), PTS-ATTN ($p = .000$), PTS-AGG ($p = .000$), LN-AGG ($p = .002$).

As with the initial model, the reduced model met the criterion of good fit on each of the five fit statistics (see Table 23). Statistically, the fit for the reduced model was not significantly poorer than the fit for the saturated model (χ^2 difference [5] = 5.51, $p = .357$). The more parsimonious, reduced model was retained.

Table 7.22

Structural Model Fit Statistics

Model	χ^2	df	χ^2/df	CFI	NNFI	SRMR	RMSEA
Initial model	60.63	27	2.25	.982	.956	.0443	.0631
Reduced model	55.12	22	2.51	.982	.963	.0477	.0694

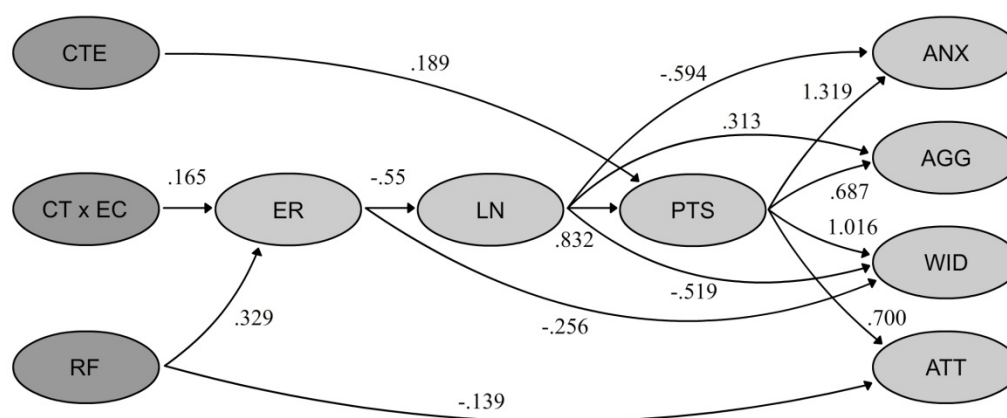


Figure 7.3. Reduced structural model with path coefficients.

7.3 Discussion

In order to expand on the body of literature pertaining to the aetiology and maintenance of externalising behaviour disorders, Study 1 had four aims: (1) report on the prevalence of child trauma and mental health concerns; (2) investigate the empirical association between maternal RF capacity and maternal emotion coaching styles; (3)

investigate the empirical relationships between maternal factors, child history of trauma and loss, child adaptive emotion regulation, and child behavioural outcomes; (4) test a theory-driven, cumulative-risk model depicting relationships between child trauma and loss, maternal parenting factors, child emotion regulation, and child outcomes. The findings pertaining to each aim are discussed below.

7.3.1 Prevalence of child trauma and mental health concerns.

In the current community sample, consonant with hypotheses (H1), a range of child mental health-related diagnoses were represented. Overall, approximately 10% of children were reported as having received a diagnosis, with ADHD (2.9%) being the most prevalent, followed by anxiety (2.5%), PTSD (<1%), ODD (<1%), and depression (<1%). Results were comparable to the Western Australian sample of 6930 families with a child aged 5 to 9 years investigated by Patterson and colleagues (2012), which included a diagnosis of ADHD in 2.2% of children. No significant gender differences were observed (Patterson et al., 2012). In contrast, Sawyer and colleagues (2000) nation-wide survey of 4509 families with a child aged 6 to 17 years reported that the clinical diagnostic requirements for a diagnosis of ADHD, CD, or depressive disorder were met by 11%, 3%, and 3% of children, respectively (Sawyer, Arney et al., 2000; Sawyer, Kosky et al., 2000). Relative to girls, boys were significantly more likely to meet the criteria for ADHD and CD (Sawyer, Arney et al., 2000; Sawyer, Kosky et al., 2000).

In the present study, the CBCL subscales revealed clinical levels of anxious/depressed symptoms in 2.9% of children, withdrawn/depressed symptoms in 1.6%, attention problems in 1.9%, and aggressive behaviour in 2.5% of children. Consonant with the pattern of diagnostic findings, the prevalence estimates reported in the present study were somewhat lower than those reported by Sawyer and colleagues (2001), who noted clinical attention problems affected 6.1% of children, and aggressive behaviour affected 5.2%.

The disparate findings across these studies are likely attributable to methodological differences. First, both the present study and the Patterson and colleagues (2012) survey recorded formal diagnoses, whereas the Sawyer and colleagues' (2000) survey employed a clinical interview. Potentially explaining the markedly lower prevalence of diagnoses, Patterson and colleagues (2012) noted that only 25% of parents of children with clinically significant levels of mental health issues thought that their children

required specialist help to deal with these concerns. Second, Sawyer and colleagues (2000) investigated an older sample. Patterson and colleagues note that the prevalence of mental health concerns tends to increase with age, with 1.2% of 5-9 year-olds utilising the services of a mental health practitioner in the previous 12 months, rising three-fold to 3.6% amongst 10-15 year-olds.

Significant gender differences were only observed for the CBCL attention problems subscale, with boys reported as exhibiting a higher level of symptoms. Pertinent to the present study, no significant gender-based differences emerged on the aggression scale. This finding contrasts with previous research indicating that male gender is a risk factor for behavioural difficulties (e.g., APA, 2000, 2013; Robinson et al., 2008). The narrower aggression construct employed in the present research may account for this discrepancy, and present an important consideration for future research. The aggression construct appears to measure a sub-set of common problematic behaviours that are exhibited by both boys and girls, in contrast to the male-skewing gender-biased set of behaviours encompassed by broader categories such as 'externalising behaviours' and diagnostic criteria for ODD and CD (Loeber et al., 2000). Interestingly, Olson and colleagues (2011) reported that child gender did not moderate relationships between risk factors and concurrent or school-age aggression.

Turning to trauma exposure, non-interpersonal stressors tended to be infrequently encountered, including being involved in or witnessing a car accident (12.4%), natural disaster (1.9%), or fire (<1%). Interpersonal stressors were the most frequently encountered trauma types, including seeing a family member in hospital (53.2%), death of a family member (42.7%), divorce of parents (25.5%), and witnessing inter-parental violence (19.7%). Of concern, interpersonal stressors can violate children's basic sense of safety, trust, and their belief that the world is a safe place (Greenwald, 2002). Further, interpersonal stressors tend to be associated with more severe and persistent symptoms, as noted in the complex trauma literature (Courtois, 2004; Gustafsson et al., 2009; Wamser-Nanney & Vandenberg, 2013).

Overall, in the present community sample of Western Australian children, approximately 91% of children had encountered at least 1 potential environmental stressor, with the majority of children encountering 3 or more types, across 4 or more discrete incidences. Consonant with Ford and colleagues (2000) claim that trauma and loss amongst community samples of children is normative, this result adds weight to Terr's (1991) claim that exposure to environmental stressors during the childhood the

period is so ubiquitous, that it is often at risk of being ignored in research and clinical practice.

7.3.2 Child trauma exposure and PTS symptoms.

In the present sample, PTS symptoms were widespread, with more than one in four children (26.8%) meeting the cut-off for clinical significance. As hypothesised (H2), correlational analyses revealed a significant, positive relationship between exposure to trauma and PTS symptoms, although the magnitude of this relationship was relatively weak. Categorical analyses revealed that children in the high trauma exposure group exhibited a significantly higher number of PTS symptom types than children in the low trauma exposure group.

Approximately 10% of the children who met the cut-off for clinical for clinically significant levels of PTS symptoms fell within the clinical range for anxious/depressed symptoms, 6% fell within the clinical range for withdrawn/depressed symptoms, 7% fell within the clinical range for attention problems, and 9.5% fell within the clinical range for aggression. Amongst children who did not meet the cut-off, none fell within the clinical range for anxious/depressed problems, withdrawn/depressed problems, attention problems, or aggression. This finding adds considerable empirical weight to the proposition of a relationship between PTS symptoms and clinical behavioural outcomes in children, including aggression.

Further, taken together, these findings correspond with previous studies pointing to the notion of symptom complexity with respect to child outcomes in the face of early trauma exposure (Briere, Kaltman, & Green, 2008). Children exposed to multiple traumas are more likely to exhibit intrusive dreams or flashbacks, hyper-arousal, externalising behaviours, internalising behaviours, and emotional dysregulation (Evans et al., 2008; Ford et al., 2000; Greenwald & Rubin, 1999; Maughan & Cicchetti, 2002; Shipman et al., 2007).

7.3.3 Child trauma exposure, adaptive emotion regulation, and emotion lability/negativity.

In the present study, as expected, the association between child adaptive emotion regulation and emotion lability/negativity was significant, negative, and moderate in magnitude. This empirical finding conforms to the theoretical underpinnings of these

two related constructs. Adaptive emotion regulation is portrayed in a positive light, and pertains to a child's ability to cope with stress, and modulate their emotional experiences and expressions in order to function appropriately within a given context, usually as dictated by social and developmental expectations (Dunsmore et al., 2013). On the other hand, child emotion lability is portrayed in a negative light, and pertains to a child's sensitivity to, rapidity of emotional reactions (especially negative emotional reactions) to, and difficulty recovering from emotion-inducing stimuli (Dunsmore et al., 2013).

Contrary to hypotheses (H3), neither the relationship between trauma exposure and adaptive emotion regulation, nor the relationship between trauma exposure and emotion lability/negativity reached statistical significance. Potential explanations for these unexpected findings are outlined below.

First, the concept of *multi-finality* states that early experiences, including early experiences of trauma or maltreatment, do not lead to the same outcomes in all children, or in the same child at different points in the lifecycle (Shields & Cicchetti, 2001). Indeed, Bailey and colleagues (2006) and Ford and colleagues (2000) reported that not all children exposed to early trauma or loss evidence disruptions to healthy development. Most are socially resilient enough to not display any adverse outcomes (Shields & Cicchetti, 2001), and fewer than 50% of children exposed to acute trauma go on to develop PTS symptoms (Ford et al., 2000). Though a significantly higher percentage of children exposed to maltreatment, devastating emotional loss, or multiple stressors are likely to be affected (Ford et al., 2000), which relates to the next explanation.

Second, the majority of previous studies investigating the relationship between child trauma exposure and child adaptive regulation have focussed on samples of maltreated children (e.g., Kim & Cicchetti, 2010; Maughan & Cicchetti, 2002; Shipman et al., 2007). Child maltreatment represents the extreme end of the spectrum of non-optimal parenting practices, and families in which maltreatment occurs often epitomise the type of maladaptive early social environments that put children at risk for problematic development (Kim & Cicchetti, 2010). Accordingly, Kim and Cicchetti (2010) proposed that chronic exposure to significant trauma or stressors is more likely to adversely impact children's stress response, leading to difficulties with affect regulation (Kim & Cicchetti, 2010). It is possible that the severity and frequency of trauma exposure encountered by the children in the present community sample was

not sufficient to establish this relationship. Adding weight to this assertion, Alink and colleagues (2009) found no associations between relatedness security and child emotion regulation, or later internalising and externalising problems, amongst a control group of non-maltreated children, contrasting with the significant pattern of results found amongst a maltreated group.

Third, the association between child trauma exposure and regulation may have been moderated by a third variable. Indeed, in the current study, moderation analyses indicated that maternal emotion coaching moderated the relationship between trauma exposure and adaptive emotion regulation. The moderating role of maternal factors in the association between child trauma exposure and emotion regulation has been documented in a number of previous studies. Alink and colleagues (2009) reported that, in a sample of maltreated children, relatedness security moderated the relationship between child maltreatment and child emotion regulation. Specifically, amongst low relationship security children, maltreatment was associated with emotion regulation, which, in turn, predicted internalising and externalising problems. Amongst the group of high relatedness security maltreated children, no association between maltreatment and emotion regulation, or later internalising and externalising problems, were observed (Alink et al., 2009). Reporting on more distal child outcomes, Katz and Windecker-Nelson's (2006) moderation analyses revealed a significant moderating effect of maternal emotion coaching in the association between maternal domestic violence exposure and child aggression, withdrawal, and anxiety/depression. Specifically, a strong relation between domestic violence exposure and adverse child outcomes was observed amongst the group of children whose mothers' exhibited lower levels of emotion coaching parenting, while no relationships were observed amongst the group of children whose mother exhibited higher levels of emotion coaching parenting.

Interestingly, closer analysis of the moderation effect observed in the present study lent itself to an interpretation that deviated from these previous studies. Specifically, child trauma exposure had a significant positive effect on adaptive emotion regulation for the high maternal emotion coaching group. For children in the low maternal emotion coaching group, child trauma exposure had no direct effect on adaptive emotion regulation. Perhaps in a community sample, where levels of encountered environmental stressors tend to somewhat less severe, caregiver's ability to approach children's traumatic or negative affect experiences openly and with acceptance may foster children's ability to tolerate and integrate these emotions, attenuating the

experience of dysregulation and likelihood of developing PTS symptomatology (Rosenblum et al., 2008). The current findings extend this proposition to suggest that, in high emotion coaching families, child exposure to stressors may in fact represent an opportunity for coaching that, in turn, has beneficial implications for the development of adaptive emotion regulation.

The absence of a relationship between child trauma exposure and child emotion lability/negativity may be accounted for by similar rationales to those discussed above. However, the nature of the theoretical underpinnings of this construct remain an additional factor. Though statistically related via a negative association, previous research suggests that child adaptive emotion regulation and emotion lability/negativity may not represent the opposite poles of one continuous dimension (Dunsmore et al., 2013). Rather, emotion lability may be tied to child temperament and individual differences, and less susceptible to sequelae of high or low adaptive emotion regulation (Dunsmore et al., 2013). In contrast, Shields and Cicchetti's (1998) finding that maltreated children displayed significantly higher levels of emotion lability/negativity than their non-maltreated peers suggested an environmental component.

7.3.4 Maternal RF capacity and maternal emotional styles.

In the present study, no systematic differences were observed in mother's self-reported RF capacity, emotion coaching, or emotion dismissing, respectively, across child gender or SES category. This finding suggests that self-reported maternal RF capacity and approaches to emotion coaching are factors that appear to be attributable to the individual parent, rather than the nature of the family environment.

Similarly, emotion coaching represents an attitude toward the socialisation of emotion that is embodied through parental behaviour that is likely more susceptible to influence from early life experiences, rather than later environmental factors (Gottman & de Claire, 1997; Gottman et al., 1996; Lagace-Seguin & Coplan, 2005; Lunkenheimer et al., 2007). Similarly, Hooven and colleagues (1995) confirmed that parental approaches to emotion coaching were associated with marital satisfaction and marital stability, but were not driven by these factors. Katz and Windecker-Nelson (2006) reported that presence or absence of domestic violence exposure did not affect how mothers coached their children's emotional expressions.

As hypothesised (H4), a significant positive relationship emerged between self-reported maternal RF and self-reported emotion coaching parenting. However, the magnitude of this relationship was relatively weak. Similarly, a significant negative relationship emerged between self-reported maternal RF and self-reported emotion dismissing parenting. The magnitude of this relationship was also relatively weak. This result provided the first empirical evidence of a relationship between these theoretically-related constructs.

It is possible that maternal RF represents a global underlying capacity that informs a mother's understanding of, and attitudes toward their own and their children's emotions. In turn, this may influence parenting behaviour, including emotion coaching (Rosenblum et al., 2008). Style of parenting, level of sensitive parenting, intrusiveness, disrupted affective communication, and comments that convey an understanding of the child's mind have been related to mother's ability to think and feel about their relationships with their children in a regulated and balanced way (Fonagy, Steele, & Steele, 1991; Grienberger et al., 2005; Rosenblum et al., 2008; Schechter et al., 2005; Slade et al., 1999; Slade et al., 2005).

Further, emotion socialisation requires that caregivers actively use internalised knowledge of emotions to coach their children with regard to employing healthy strategies for the regulation of emotion (Lagace-Seguin & Coplan, 2005; Sharp & Fonagy, 2008). This process presupposes caregivers have the capacity to readily access and understand their own affect, in a healthy, undistorted manner. This ability is heavily influenced by capacity for mentalising (Fonagy et al., 1991). Noting Barker and Maughan's (2009) proposition that positive parenting attitudes and positive parenting behaviours may be reciprocal, interventions targeting either maternal RF or maternal emotion coaching behaviours are likely to influence both of these important maternal abilities.

7.3.5 Maternal RF, maternal emotional styles, and child regulation.

A strong association between maternal capacity for mentalisation and the security of the early attachment relationship has been consistently championed in the literature (Allen et al., 2008; Slade et al., 2005). In particular, low parental capacity for mentalisation has been identified as a risk factor for an insecure attachment relationship, characterised by inadequate levels of external regulation of children's internal experience via re-presentation and containment. Such an environment may

preclude children from opportunities to begin to gain control over and understanding of affective experiences, leading to deficits in the development of self-regulation and the ability to mentalise (Allen et al., 2008; Slade, 2005; Slade, Grienenberger et al., 2005; Grienenberger et al., 2005).

Empirical evidence for an association between maternal emotion coaching, and child emotion regulation comes from Gottman and colleague's (Gottman & Katz, 1989; Gottman et al., 1996; Hooven et al., 1995; Katz & Gottman, 1993) series of landmark longitudinal assessments, which found that the children of parents who engaged in more emotion coaching behaviour early in their child's life experienced lower levels of early physiological stress, higher regulation physiology, and a greater ability to inhibit impulsive responses to extraneous stimuli and focus attention. Later in childhood, these children exhibited elevated emotion regulation skills and fewer behaviour problems. More recently, Waters and colleagues (2010) stated that children who experience secure and validating relationships with their mother are more likely to discuss negative affects and possess greater understanding of negative affect. In turn, the authors claimed that these capacities were related to elevated levels of child emotion regulation (Waters et al., 2010).

Consonant with these studies, and as hypothesised (H5), the direct relationship between self-reported maternal RF and child adaptive emotion regulation was significant and positive in the present study. Similarly, the direct relationship between self-reported maternal emotion coaching and child adaptive emotion regulation was significant and positive. Also as hypothesised (H6), the direct relationship between self-reported maternal emotion dismissing and child adaptive emotion regulation was significant and negative. Regarding the relatively weak associations observed between maternal factors and child adaptive emotion regulation in the present study, previous studies have reported that maternal emotional factors, including RF, may play a less significant role in low-risk mother-child dyads (Slade et al., 2005).

Contrary to hypotheses (H5, H6), in the current study, neither the direct relationship between maternal RF and child emotion lability/negativity, the direct relationship between maternal emotion coaching and child emotion lability/negativity, nor the direct relationship between maternal emotion dismissing and child emotion lability/negativity reached statistical significance. In light of the discussion pertaining to the nature of child emotion lability/negativity, this pattern of findings adds weight to the potential theoretical divide between the constructs of child adaptive emotion regulation and

lability/negativity, and highlights that this construct requires further elucidation through more fine-grained research.

Turning to child outcomes, other than a weak, negative association between self-reported maternal RF and child attention problems, no significant relationships between self-reported maternal RF, emotion coaching, or emotion dismissing, and child outcomes, respectively, were observed in the present study. Based on previous research, it is likely that child outcomes were too distal to be directly impacted by emotion-related maternal factors. In their model of maternal influence on child outcomes, Gottman and colleagues (1996) proposed that parent meta-emotion exerted its influence via its effect on parenting behaviours and child regulation. Providing empirical support for this proposition, Ramsden and Hubbard (2002) reported no direct relationship between either level of familial negative expressiveness and child aggression, or emotion coaching and child aggression. Rather, familial negative expressiveness and emotion coaching indirectly affected levels of child aggression via their impact on child emotion regulation.

7.3.6 Child emotion regulation and adverse outcomes.

As hypothesised (H7), in the present study, the direct relationships between child adaptive emotion regulation and anxious/depressed behaviours, withdrawn/depressed behaviours, aggression, and attention problems were significant and negative. The magnitude of the relationships between adaptive emotion regulation and withdrawn/depressed, and adaptive emotion regulation and aggression, were moderate. The magnitude of the relationships between adaptive emotion regulation and anxious/depressed, and between adaptive emotion regulation and attention, were relatively weak.

Previous studies measuring a range of child outcomes have reported associations between higher child adaptive emotion regulation and lower levels of concurrent and future externalising behaviour problems (Bandon et al., 2010), oppositional behaviours, ADHD symptoms, separation anxiety, and symptoms of anxiety and depression (Cole et al., 1996). Relative to control children, children with a diagnosed anxiety disorder are more likely to encounter dysregulated emotion (Suveg & Zeman, 2004).

Similarly, as hypothesised (H8), the direct relationships between child emotion

lability/negativity and anxious/depressed behaviours, withdrawn/depressed behaviours, aggression, and attention problems, respectively, were significant. The magnitude of the relationships between emotion lability/negativity and anxious/depressed, emotion lability/negativity and withdrawn/depressed, and emotion lability/negativity and attention, were moderate. The magnitude of the relationship between and emotion lability/negativity and aggression was strong.

These findings were consistent with previous research (e.g., Shields & Cicchetti, 1998). Amongst youths, higher levels of emotion lability/negativity have been linked to depressive symptoms, and non-aggressive behavioral problems including a propensity to lie, argue, and steal (Silk, Steinberg, & Morris, 2003). Importantly, emotion lability/negativity, is also related to child aggression. Dunsmore and colleagues (2013) suggested that children who encounter high levels of lability/negativity may be overwhelmed in social situations, experiencing intense affect, social anxiety, and a disrupted ability to accurately perceive and interpret social cues (e.g., Gross, 2002; Hanish et al., 2004).

7.3.7 Cumulative-risk model.

Consonant with hypotheses (H9), the theory-driven cumulative-risk model depicted in Figure 7.3 was empirically verified by the large sample of community data analysed in the current study. Before interpreting the significant pathways that define the model, it is perhaps first worth noting the demonstrated importance of cumulative modelling in investigations into complex child outcomes. Direct, mediated, or moderated (Baron & Kenny, 1986) associations between key variables that have been reported in previous studies need be re-examined in the context of a cumulative model.

Despite achieving significant direct associations with other pertinent variables included in the current study, path analyses resulted in the two endogenous variables related to maternal emotional styles, namely emotion coaching and emotion dismissing, being removed, as their influence on child outcomes were better accounted for by maternal reflective functioning, and the interaction between emotion coaching and child trauma exposure.

Similarly, nine direct pathways that achieved statistical significance in isolation did not contribute significantly over and above more salient pathways in the context of the path model. Specifically, the pathways between trauma exposure and anxiety, trauma

exposure and aggression, maternal emotion coaching and adaptive emotion regulation, maternal emotion dismissing and adaptive emotion regulation, adaptive emotion regulation and PTS, anxiety, aggression, and attention, respectively, and emotion lability/negativity and attention problems, each reduced to non-significance.

Looking at subsets of variables within the resulting model, it becomes evident that, as a child outcome, aggression is associated with a number of factors and mechanisms that may work in concert to either promote or reduce its likelihood. Starting with endogenous variables, child trauma exposure, maternal self-reported capacity for RF, and maternal emotion coaching, were associated with child adaptive emotion regulation. Specifically, higher level of maternal RF was directly associated with higher adaptive emotion regulation in children. The moderation effect of maternal emotion coaching on the relationship between child trauma exposure and adaptive emotion regulation remained significant. Importantly, in addition to the indirect pathway from child trauma exposure to PTS symptoms via regulation, a direct pathway also emerged in the current study, consonant with Bailey and colleagues (2006). This result extends the findings of Bailey and colleagues (2006), who reported a pathway from trauma exposure to PTS symptoms but did not test for a pathway via regulation.

The significant pathway between maternal RF and child attention problems suggests that children of mothers with a higher capacity for mentalising were less likely to encounter attention problems. Alternately, children of mothers with a lower capacity for mentalising were more likely to encounter attention problems. This finding is particularly interesting given Shields and Cicchetti's (1998) proposition that the executive attention regulation system is a primary regulatory mechanism, distinct from the emotion regulation system, that emerges early in the lifespan and facilitates sensory input co-ordination, behavioural response organisation, and attention shifting and disengagement. Each of these functions has been associated with emotional regulation and successful adaptation to changing environmental stimuli (Shields & Cicchetti, 1998).

The significant pathway between child adaptive emotion regulation and withdrawn/depressed problems suggests that children who were better equipped to modulate their emotional experiences and expressions in order to function appropriately within a given context, were less likely to encounter problems with social withdrawal and depression. Alternately, children who were less able to modulate their emotional experiences and expressions were more likely to encounter problems with

social withdrawal and depression. This finding is consistent with previous conceptualisations of adaptive emotion regulation, which suggest that a more highly developed ability to regulate emotional arousal, especially during times of stress or dynamic relational encounters, enables an elevated level of engagement with the social environment (Kim & Cicchetti, 2010).

The significant relationship between adaptive emotion regulation and emotion lability/negativity remained influential. Importantly, it has been suggested that the relationship between emotion lability and difficulties with emotional skills indicate that children who exhibit elevated levels of emotion lability may be particularly likely to benefit from supportive emotion coaching (Dunsmore et al., 2013). Indeed, in children who exhibit lability in emotional responsiveness and a propensity toward negative affect, maternal emotion coaching appears to act as a protective factor against the development of externalising behaviour (Dunsmore et al., 2013). This represents an area for future research.

One of the most important findings to emerge from the current study was the significant relationship between child PTS symptoms and each of the four outcome variables. These pathways remained significant over and above significant contributions from maternal RF, child adaptive emotion regulation, and emotion lability/negativity. This result adds to the accumulating body of evidence which suggests that adverse child outcomes may be best conceptualised with trauma sequelae in mind. It is worth noting that the relationships between PTS symptoms and child outcomes may be causal, bi-directional, interactive, or overlapping (Ford et al., 2000). Indeed, hyper-vigilance, a PTS-related attention symptom, evokes heightened sympathetic arousal and fixates the attentional system on distressing thoughts or events which, in turn, facilitates distractibility, emotional dysregulation, behavioural dysregulation, and aggressive behaviour (Shields & Cicchetti, 1998).

Finally, the strong, positive associations noted between aggression and the three additional outcome variables measured in the current study, namely anxiety problems, withdrawn/depressed problems, and attention problems, suggest that child aggression rarely occurs in isolation. Rather, it is part of a wider set of difficulties that affected children must contend with, and may require assistance with if interventions are to be effective. This finding adds weight to previous studies, which have reported that children with CD are at increased risk for comorbid anxiety disorders, and that withdrawal and depression are positively associated with delinquency (e.g., Loeber et

al., 2000). However, internalising problems have traditionally been ignored in mainstream intervention programs for child behavioural problems (Priddis et al., 2014).

Further, current approaches to intervention tend to ignore the potential contribution of trauma, underlying difficulties with adaptive emotion regulation, emotion lability/negativity, parent mentalising, or child mentalising. Addressing these gaps represents a critical task for future investigations and practitioners involved in treatment design (Priddis et al., 2014).

7.4 Research Limitations

The current study had a number of limitations that need be considered when interpreting the results. First, as highlighted by semi-parametric group-based modelling which permit individual-centred life-course trajectory analyses (e.g., Broidy et al, 2003; Cote et al., 2006; Loeber & Stouthamer-Loeber, 1998; Nagin & Tremblay, 1999; NICHD Early Child Care Research Network, 2004; Tremblay et al., 2004), the summary analyses employed in the current study may have masked heterogeneous individual characteristics extant within the community sample. This is particularly problematic if the magnitude of the relationships between variables differs as a function of category, for example the clinically significant trauma exposure group, the clinically significant aggression problems group, or the group of children whose mother exhibited categorically low RF (Vitaro et al., 2006). Restricted sample size prevented independent investigations of each of these sub-groups.

Second, though the path diagram in Figure 7.3 contains relationships with specified directional influences, structural equation models attempt to specify order based on statistical associations, rather than assertions of causation (Vogt, 1999). Kline (2005) states that assertions of causation require that three criteria be met, namely *covariation*, *directionality*, and *causal closure* (see Kline, 2005). The data set and SEM analyses employed in the current study met the criteria for covariation, but did not meet the criteria for directionality or causal closure. Thus, the structural model presented in Figure 7.3 can only be used to infer that this network of associations adequately accounted for the cross-sectional correlational data. It should not be interpreted as a causal model of developmental pathways.

Third, the sampling methodology employed may have introduced statistical biases. Lewis-Beck and colleagues (2004) stated that the sampling frame should be both

accurate and comprehensive. The researchers concluded that the sample analysed in Study 1 had a relatively high level of accuracy (Lewis-Beck et al., 2004), and noted that it shared demographic-based similarities with comparable studies. However, due to constraints on time frame and resources, the current study was only able to recruit and investigate participants from 14 public primary schools using a convenience sample. As such, a more comprehensive sample recruited via a more scientifically robust sampling procedure, such as simple random sampling (Hulley et al., 2007), may be required to support inferences about the broader target population.

Further, previous authors have asserted that samples comprising predominantly middle-class participants often tend not to encompass the variation or extremes in childhood experiences or parental behaviours that may be found in higher-risk samples (e.g., Chang et al., 2011). Notably, in the current study, no children had received a diagnosis of CD, and only one had received a diagnosis of ODD. All surveys relying on voluntary participation are susceptible to sampling-bias (Sawyer et al., 2001). In particular, enlisting the voluntary participation of families with children with behaviour disorders tends to be uniquely difficult (Landy, 2011). One of the aims of Study 2, which is detailed in the next Chapter, was to narrowly investigate this population.

Fourth, in accordance with ethical requirements pertaining to receiving approval for the current study, items relating to child physical maltreatment, sexual abuse, and neglect were removed, which prohibited the examination of these important child risk factors.

Finally, child outcomes, including aggression, are often the culmination of a constellation of inter-related factors, and comparable outcomes may eventuate via a range of disparate pathways (Rutter, 2009). The current study attempted to include a range of salient child and maternal factors, however, numerous additional risks have been identified in the literature. These factors may warrant testing within a cumulative-risk model.

7.5 Summary

As a behavioural outcome, childhood aggression appears to be associated with a number of factors and mechanisms that may work in concert to either promote or reduce its likelihood. The theory-driven cumulative-risk model depicted in Figure 7.3 was empirically verified by the large sample of community data analysed in the current study. In this model, maternal RF was positively associated with child adaptive

emotion regulation, and negatively associated with child attention problems. Maternal emotion coaching interacted with child trauma exposure, and appeared to buffer against the potentially adverse effects of trauma exposure on adaptive emotion regulation. Child adaptive emotion regulation was negatively associated with social withdrawal and depression. Child PTS symptoms were positively associated with each of the four adverse outcome variables. These pathways remained significant over and above significant contributions from maternal RF, child adaptive emotion regulation, and emotion lability/negativity. Finally, positive associations emerged between aggression and the three additional outcome variables, namely anxiety problems, withdrawn/depressed problems, and attention problems.

The need for deeper examination of the salient factors highlighted in the current study, particularly child trauma exposure, maternal RF, and maternal emotion coaching, provided a foundation for Study 2. A broader, qualitative investigation of the familial environment and mother-child relationship in families with clinically-referred children is described in the next Chapter.

CHAPTER 8

STUDY 2: EXPLORATION OF A CLINICAL SAMPLE

In order to expand on the body of literature pertaining to the aetiology and maintenance of externalising behaviour disorders, Study 2 built upon the findings of Study 1 by exploring child and parenting factors in greater depth. Study 2 also built upon a pilot study previously conducted by the authors (Priddis et al., 2014). Approaches to participant recruitment and procedure were informed by this pilot study (see Priddis et al., 2014).

Following Levac and colleagues (2008), participation in this qualitative study was anticipated to permit mothers a unique opportunity to openly reflect on their experiences and lives, and offer insight as to their circumstances and needs, such that these may be incorporated into future iterations of service delivery. The first aim of Study 2 was to contribute empirical findings to the debate surrounding the inclusion of child trauma exposure and maternal factors into clinical and diagnostic conceptualisations of child behaviour problems. To achieve this aim, the trauma and mental health histories of a sample of children, aged 4 to 12 years, referred for clinical levels of disruptive behaviour were investigated via a quantitative maternal-report measure, and over the course of a qualitative semi-structured interview. In addition, maternal-reports and child self-reports of child PTS symptoms were administered. The administration of a semi-structured interview with mother's and child self-reports of PTS symptoms were unique to Study 2.

The second aim of Study 2 was to investigate the concordance between maternal reports and child self-reports of child PTS symptoms, to note any inconsistencies that may be of relevance to future studies. To achieve this aim, maternal-reports and child self-reports of PTS symptoms were administered and empirically compared.

The third aim of Study 2 was to investigate maternal factors amongst a sample of mothers of referred children. In particular, RF capacity was investigated via a deeper and more nuanced approach, in order to obtain a better sense for the way that mothers of clinically referred children think and feel about both their child and their relationship with their child. To achieve this aim, qualitative, semi-structured interviews, designed to evaluate a caregiver's ability to openly reflect on mental states that are often complex and discomforting, were conducted with mothers of children referred to the Family Pathways service. The introduction of the *Parent Development Interview* (PDI;

Slade et al., 2003), a semi-structured interview measure of maternal RF, was central and unique to Study 2.

The fourth aim of Study 2 was to test the concordance between RF scores as measured by the PDI and a questionnaire-based measure of RF. To achieve this aim, empirical RF scores assigned to PDI transcripts were compared to average RF scores recorded for the *Parental Reflective Function Questionnaire* (PRFQ; Luyten et al., 2009). This was the first known empirical validation of the PRFQ measure against the gold-standard PDI.

The fifth aim of Study 2 was to explore the thoughts, feelings, and experiences of mothers with clinically aggressive children in order to better understand the hopes, joys, struggles, and facets of daily life that are pertinent to this population. In particular, mothers' perceptions of the impact that their child's behavioural problems have had on themselves, their child, their family, and the mother-child relationships, will be targeted. To achieve this aim, the IPA approach to qualitative analysis was employed to explore participant views, attitudes, perceptions, and interpretations relating to themselves, their child, and the maternal role (Smith, 1996; Smith & Osborn, 2003). Transcripts of the semi-structured interview were analysed qualitatively for important and recurrent themes related to the experience of raising a clinically-referred child.

Based on findings reported in the current literature, the six aims of Study 2 generated five hypotheses:

- H1. Clinically-referred children were expected to have been diagnosed with higher numbers of mental health diagnoses, and to exhibit higher levels of clinically significant adverse outcome behaviours, than their peers in community samples.
- H2. Clinically-referred children were expected to have been exposed to higher levels of trauma and loss than their peers in community samples.
- H3. Mothers of referred children were expected to have encountered higher levels of mental health concerns and environmental stressors than mothers of non-referred children.

- H4. The direct relationship between maternal reports and child self-reports of child PTS symptoms were expected to be significant and positive.
- H5. Maternal RF capacity was expected to span the scale from limited or low RF to marked or high RF.
- H6. Maternal RF as measured by the PDI was expected to be significantly, and positively related to RF as measured by the PRFQ.

With regard to the qualitative analysis of the semi-structured interview transcripts, the IPA procedure encourages researchers to avoid investigating predetermined hypotheses (Smith & Osborn, 2003). Rather, an open, flexible, detailed, and exploratory approach is recommended to ensure that a more accurate and representative portrayal of the subjective data provided by members of the area of research interest is observed and reported (Smith & Osborn, 2003).

8.1 Method

8.1.1 Participants.

Over a recruitment period of 18 months, the families of 25 children referred to the Family Pathways service were invited to participate in the study. In total, 15 mothers, representing a response rate of 60%, agreed to complete the questionnaire pack and participate in the interview. Reasons for non-participation included: mother deceased (1 family), no contact with mother (1 family), mother mentally unwell (2 families), child in care of foster parents or the State (3 families), mother chose not to participate (3 families). Data from 6 of the 15 child participants was not included due to clinician indication that the respondent made inappropriate responses (1 child), was too young (1 child), or was disinterested in participation (4 children).

8.1.1.1 Participant recruitment.

To recruit the clinical sample, case co-ordinators from Family Pathways invited the families of child clients to participate in the research at intake. To maximise ecological validity, no inclusion or exclusion criteria were placed on family status, ethnicity, or household income. Parents were not selected as special cases, and were not intended

to be representative of all parents with children affected by behaviour difficulties (Smith, 1996).

8.1.1.2 Maternal and family demographics.

Table 8.1 and Table 8.2 report the maternal and familial demographic data for Study 2. Family homes comprised an average of 1.80 adults ($SD = 0.41$, $range = 1 - 2$), and 2.40 children ($SD = 0.99$, $range = 1 - 4$) (see Table 8.1).

The majority of mothers (60.0%) were not currently married, and 93.3% reported a household income that fell within the middle or upper socio-economic status (SES) range, according to income ranges specified by the Australian Bureau of Statistics (ABS; 2009). The majority of mothers (80.0%) reported having experienced at least one type of mental health issue, with incidences of depression (73.3%) and anxiety (66.7%) being the most prevalent. Amongst mothers reporting at least one type of mental health issue ($n = 12$), 25.0% reported experiencing one type, 50.0% reported experiencing two types, and 25.0% reported experiencing three or more types (see Table 8.2).

Table 8.1

Means, Standard Deviations, and Ranges for Maternal and Familial Demographic Data

Variable	Overall ($N = 15$)		SES					
			Low ($n = 1$)		Mid ($n = 9$)		High ($n = 5$)	
	M (SD)	Range	M (SD)	Range	M (SD)	Range	M (SD)	Range
Adults at home	1.80 (0.41)	1 - 2	2.00 (-)	-	1.67 (0.50)	1 - 2	2.00 (-)	-
Children at home	2.40 (0.99)	1 - 4	4.00 (-)	-	2.56 (0.88)	1 - 4	1.80 (0.84)	1 - 3
Mat mental health	1.80 (1.42)	0 - 5	2.00 (-)	-	1.56 (1.51)	0 - 5	2.20 (1.48)	0 - 4

8.1.1.3 Child demographics.

Table 8.3 and Table 8.4 report the child demographic data for Study 2. The average age was 9.11 years ($SD = 2.21$, $range = 4.6 - 12.7$). The sample comprised 10 males (66.7%) and 5 females (33.3%). A majority (73.3%) of children were reported as having received a mental health diagnosis ($M = 1.80$, $SD = 1.66$, $range = 0 - 5$) (see Table 8.3).

Table 8.2

Frequencies and Percentages for Maternal and Familial Demographic Data

Variable	Overall (N = 15)		SES					
	Freq.	%	Low (n = 1)		Mid (n = 9)		High (n = 5)	
Parental relationship								
Single	2	13.3	0	0.0	2	22.2	0	0.0
Married	6	40.0	0	0.0	3	33.3	3	60.0
Divorced	0	0.0	0	0.0	0	0.0	0	0.0
Defacto	5	33.3	1	100.0	2	22.2	2	40.0
Blended	2	13.3	0	0.0	2	22.2	0	0.0
Other	0	0.0	0	0.0	0	0.0	0	0.0
Maternal mental health								
ANX	10	66.7	1	100.0	5	55.6	4	80.0
DEP	11	73.3	1	100.0	6	66.7	4	80.0
UL/T	2	13.3	0	0.0	1	11.1	2	20.0
PTS	3	20.0	0	0.0	1	11.1	2	40.0
BP	1	6.7	0	0.0	1	11.1	0	0.0
Other	0	0.0	0	0.0	0	0.0	0	0.0
Maternal mental health comorbidity								
None	3	20.0	0	0.0	2	22.2	1	20.0
1	3	20.0	1	100.0	3	33.3	2	40.0
2	6	40.0	0	0.0	3	33.3	1	20.0
≥3	3	20.0	0	0.0	1	11.1	1	20.0

The most prevalent mental health diagnoses reported were ADHD (53.3%) and anxiety (40.0%). Amongst children who were reported as having received at least one clinical diagnosis ($n = 11$), 36.4% had received only one diagnosis, 18.2% had received two comorbid diagnoses, and 45.4% were reported as having been diagnosed with three or more comorbid issues (see Table 8.4).

Table 8.3

Child Descriptive Demographic Data

Variable	Overall (N = 15)	Gender (Child)		SES		
		Male (n = 10)	Female (n = 5)	Low (n = 1)	Mid (n = 9)	High (n = 5)
Age						
M (SD)	9.11 (2.21)	9.54 (1.78)	8.24 (2.93)	7.5 (-)	9.6 (1.90)	8.54 (2.88)
Range	4.6 - 12.7	6.5 - 12.3	4.6 - 12.7	-	7.3 - 12.7	4.6 - 11.5
Child Mental health Diagnoses						
M (SD)	1.80 (1.66)	1.60 (1.43)	2.20 (2.17)	- (-)	2.33 (1.73)	1.20 (1.30)
Range	0 - 5	0 - 4	0 - 5	-	0 - 5	0 - 3

8.1.2 Measures.

In addition to the six measures completed by mothers in Study 1 (LITE-P, PROPS, PRFQ, ERC, MESQ, and CBCL), two additional measures (*Child Report of Post-traumatic Symptoms* and PDI) were completed by mothers in Study 2. See Chapter 7

for descriptions and psychometric properties of the LITE-P, PROPS, PRFQ, ERC, MESQ, and CBCL. Descriptions and psychometric properties of the *Child Report of Post-traumatic Symptoms*, and the PDI are outlined below.

Table 8.4

Child Mental Health Diagnoses and Comorbidity

Variable	Overall (N = 15)		Gender (Child)				SES					
			Male (n = 10)		Female (n = 5)		Low (n = 1)		Mid (n = 9)		High (n = 5)	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Child mental health diagnoses												
ADHD	8	53.3	5	50.0	3	60.0	0	0.0	5	55.6	3	60.0
ODD	3	20.0	3	30.0	0	0.0	0	0.0	2	22.2	1	20.0
CD	1	6.7	0	0.0	1	20.0	0	0.0	1	11.1	0	0.0
PTS	1	6.7	0	0.0	1	20.0	0	0.0	1	11.1	0	0.0
ANX	6	40.0	4	40.0	2	40.0	0	0.0	4	44.4	2	40.0
DEPR	3	20.0	2	20.0	1	20.0	0	0.0	3	33.3	0	0.0
AUT	2	13.3	1	10.0	1	20.0	0	0.0	2	22.2	0	0.0
Other	3	20.0	1	10.0	2	40.0	0	0.0	3	33.3	0	0.0
Child mental health comorbidity												
None	4	26.7	3	30.0	1	20.0	1	100	1	11.1	2	40.0
1	4	26.7	2	20.0	2	40.0	0	0.0	3	33.3	1	20.0
2	2	13.3	2	20.0	0	0.0	0	0.0	1	11.1	1	20.0
≥3	5	33.3	3	30.0	2	40.0	0	0.0	4	44.5	1	20.0

8.1.2.1 Maternal factors.

The Parent Development Interview - Revised - Short Version (PDI-R2-S; Slade et al., 2003) is a semi-structured interview that contains 30 questions grouped into six categories: (1) view of the child, (2) view of the parent-child relationship, (3) experience of parenting, (4) family history, (5) separation from child, and (6) looking behind/ahead. The instrument was developed to investigate the quality of parents' representations of their relationship with a particular child. The revised interview takes approximately 60 to 90 minutes to complete, and is suitable for use with parents of infants through to parents of early adolescent children. Interview transcripts require coding by accredited coders, to produce a score between -1 and 9, corresponding to the mother's RF capacity. Scores from -1 to 4 are classified as *negative to limited RF*, and represent a maternal risk factor. Scores from 5 to 9 are classified as *moderate to high*, and represent a maternal protective factor (Fonagy, Steele, Steele, & Target, 1998b). Across a range of population samples, the PDI has demonstrated adequate construct and predictive validity (Slade, 2005).

PDI transcripts were analysed by a consortium of highly experienced, accredited coders, who assigned a quantitative value for the level of maternal RF capacity evident

in each interview transcript, according to procedures set out in the Addendum to the Reflective Functioning Scoring Manual (Slade, Bernbach, Grienberger, Levy, & Locker, 2002). A sample of 25% of the interviews was re-scored by a second coder from the consortium to test for inter-rater reliability. An intra-class correlation (ICC) above .70 indicates adequate inter-rater reliability (Lance, Butts, & Michels, 2006). For the sampled interviews, inter-rater reliability was high, with a Cronbach's alpha of .92, and an ICC [$F(3, 3) = 12.64, p = .03$] of .92 for average measures, and an ICC [$F(3, 3) = 12.64, p = .03$] of .85 for single measures.

8.1.2.2 Child factors.

Child Report of Post-traumatic Symptoms (CROPS; Greenwald & Rubin, 1999) is a self-report questionnaire for children and adolescents, aged 7-17, containing 26 items rated on a 3-point Likert scale, from 0 ("Never") to 2 ("Lots"). The instrument was developed to measure the distinct range of post-traumatic symptoms exhibited by children, in contrast to the adult-oriented and narrower range of symptoms listed in the PTSD category of the prevailing diagnostic tool at the time, the DSM-IV (APA, 1994) (Greenwald, 2005). In conjunction with the PROPS, the authors propose that the measure is appropriate for use in mental health research and as a screening tool, both with community and clinical populations. The CROPS has been found appropriate for males and females of school age (6-18 years). The CROPS possesses excellent psychometric properties, with an internal consistency coefficient of .80-.92 (Greenwald & Rubin, 1999; Greenwald, Satin, Azubuike, Borgen, & Rubin, 2001; Jurkovic et al., 2002; Wiedemann & Greenwald, 2000; Russell et al., 2002), a test-retest reliability coefficient of .70-.80 (Greenwald & Rubin, 1999; Greenwald et al., 2001), acceptable factorial validity (Greenwald & Rubin, 1999; Jurkovic et al., 2002; Wiedemann & Greenwald, 2000), and acceptable content validity (Greenwald & Rubin, 1999). For the current study, sum of item scores was used as the measure of child-reported post-traumatic symptoms. Higher scores indicate higher symptomatology. Scores above 19 suggest cause for clinical concern (Greenwald, 2005).

8.1.3 Procedure.

Ethical clearance to conduct Study 2 was provided by the Curtin Human Research Ethics Committee and the Princess Margaret Hospital (PMH) for Children Ethics Committee and Research Governance Officer (see Appendix B).

Mothers were invited to complete a series of questionnaires and participate in a semi-structured interview as part of the broader intake procedures already in place for families attending the Family Pathways clinic. Mothers agreeing to participate were provided a questionnaire pack, which included an information sheet (see Appendix E), detailing the voluntary nature of the study, and the nature of the desired respondents, namely, mothers reporting on behalf of one of their children (aged between 4 and 12 years). In accordance with PMH procedures, a parental consent form, and a parental consent form for child participation were also included (see Appendix E), and signed by the parent prior to participation. Completing the questionnaire pack was estimated to take approximately 20 minutes. Mothers returned the completed measures to their case co-ordinator, who provided the researchers with de-identified packs.

Mothers also arranged a time with their case co-ordinator, or one of the researchers, to take part in the PDI at a location convenient for the participant. The interview took approximately 50-120 minutes, and was audio recorded, such that a verbatim transcript could be generated for subsequent analyses. All names and identifying information was excluded from the transcripts. De-identified questionnaire packs, interview recordings, and transcripts were assigned an ID number.

Child clients of participating mothers were invited to complete one measure with the assistance of their parent or Family Pathways case co-ordinator, as a part of the broader intake procedures already in place for children attending the Family Pathways clinic. In accordance with PMH procedures, a child assent form was signed by children prior to completing the questionnaire (see Appendix F). Completing the short questionnaire was estimated to take approximately five minutes. Case co-ordinators provided the researchers with de-identified, completed measures.

Families who participated were provided a \$30 grocery voucher to compensate them for their time.

8.1.3.1 Data management.

Questionnaires were scored by a researcher and input into an electronic database for analyses. Audio recordings of interviews were transcribed verbatim by the researchers and a professional transcription service. No identifying information was included in the transcripts.

8.2 Quantitative Results

There were no missing parent-report data to account for, as all questionnaire packs were fully completed prior to return to the researchers. All analyses were conducted in the SPSS computer program (Version 22 IBM Australia, Sydney, NSW, Australia).

8.2.1 Descriptive statistics.

Fourteen variables were analysed in Study 2 (see Table 8.5).

Table 8.5

Variables Analysed in Study 2

Measure	Abbreviation	No. Items	Maternal / Child Factor
PDI			
Reflective functioning	RF-I	N/A	Maternal
PRFQ			
Reflective functioning	RF-Q	31	Maternal
MESQ			
Emotion coaching	EC	7	Maternal
Emotion dismissing	ED	7	Maternal
LITE-P			
Child trauma exposure	CTE	16	Child
Child trauma exposure - types	CTT	16	Child
ERC			
Emotion regulation	ER	8	Child
Affect lability/negativity	LN	15	Child
PROPS			
Post traumatic symptoms	PTS-P	32	Child
CROPS			
Post traumatic symptoms	PTS-C	26	Child
CBCL			
Anxious/depressed	ANX	13	Child
Withdrawn/depressed	WID	8	Child
Attention problems	ATT	10	Child
Aggressive behaviour	AGG	18	Child

8.2.1.1 Maternal factors.

Descriptives for the four maternal variables (RF-I, RF-Q, EC, ED) are reported in Table 8.6. The mean RF-Q score was 5.21 ($SD = 0.41$, $range = 4.45 - 5.84$). The mean EC score was 25.67 ($SD = 3.77$, $range = 20 - 31$). The mean ED score was 22.80 ($SD = 5.25$, $range = 15 - 31$). The mean RF-I score was 4.47 ($SD = 1.64$, $median = 5$, $mode = 5$, $range = 0 - 7$).

Table 8.6

Maternal Factors Self-Reported for Study 2 (N = 15)

Variable	<i>M</i>	(<i>SD</i>)	<i>Range</i>
RF-I	4.47	(1.64)	0 - 7
RF-Q	5.21	(0.41)	4.45 - 5.84
EC	25.67	(3.77)	20 - 31
ED	22.80	(5.25)	15 - 31

Of the 15 mothers, 6 were rated as having conveyed 'limited capacity for RF', with 1 rated as 'absent RF' (score = 0), and 5 rated as 'questionable or low RF' (score = 3, 4) (see Figure X). Nine of the mothers were rated as having conveyed a 'moderate to high capacity for RF', with eight rated as 'definite or ordinary RF' (score = 5, 6), and one rated as 'marked RF' (score = 7) (see Figure 8.1).

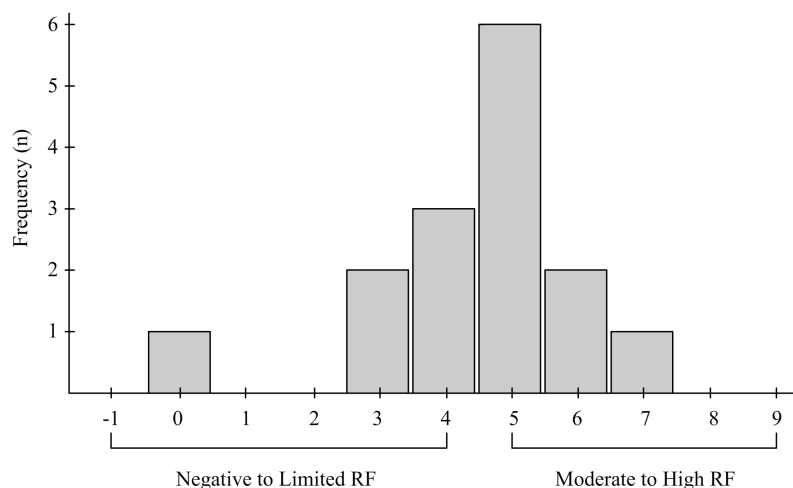


Figure 8.1. Frequencies of RF-I scores amongst 15 mothers of children with clinical levels of behaviour problems.

8.2.1.2 Child factors.

Descriptives for the 10 child variables (CTT, CTE, ER, LN, PTS-P, PTS-C, ANX, WID, ATT, AGG), across gender, are reported in Table 8.7. On average, the children in the referred sample had experienced 8.6 exposures to trauma ($SD = 5.77$, $range = 2 - 27$), across 5.13 types of traumatic experiences ($SD = 2.03$, $range = 2 - 9$) (see Table 8.7).

Table 8.7

Child Factors Across Gender

Variable	Overall (N = 15)			Gender					
				Male (n = 10)			Female (n = 5)		
	M	(SD)	Range	M	(SD)	Range	M	(SD)	Range
CTT	5.13	(2.03)	2 - 9	4.50	(1.78)	2 - 8	6.40	(2.07)	4 - 9
CTE	8.60	(5.77)	2 - 27	7.50	(3.24)	2 - 12	10.80	(9.15)	5 - 27
ER	20.47	(3.00)	15 - 24	20.50	(3.31)	15 - 24	20.40	(2.61)	17 - 24
LN	44.20	(7.07)	25 - 53	45.60	(4.99)	38 - 53	41.40	(10.21)	25 - 53
PTS-P	33.00	(12.27)	12 - 55	31.00	(10.38)	12 - 44	37.00	(15.95)	15 - 55
PTS-C	34.78 ¹	(11.37)	12 - 48	36.00 ²	(7.31)	30 - 47	33.25 ³	(16.36)	12 - 48
ANX	10.87	(5.88)	1 - 20	9.70	(6.24)	1 - 20	13.20	(4.82)	8 - 20
WID	4.73	(3.39)	0 - 12	4.90	(2.92)	0 - 9	4.40	(4.56)	1 - 12
ATT	13.07	(4.98)	0 - 19	13.20	(3.19)	8 - 18	12.80	(7.98)	0 - 19
AGG	20.47	(7.95)	0 - 32	21.10	(6.17)	13 - 32	19.20	(11.52)	0 - 28

¹ n = 9, ² n = 5, ³ n = 4.

Table 8.8 reports the frequencies and percentages of children categorised as within the normal, borderline, or clinical range for each CBCL subscale included in the analyses. Overall, a minority of children fell within the normal range, ranging from 6.7% for the aggression subscale to 40% for withdrawn/depressed subscale (see Table 8.8). At the clinical level, aggression was the most endorsed behavioural issue (73.3%), followed by attention problems (53.3%), anxious/depressed (40.0%), and withdrawn/depressed (40.0%) (see Table 8.8).

Table 8.8

Frequencies of CBCL Sub-Scale Categorisation Across Gender

Subscale	Overall (N = 15)		Gender (Child)			
			Male (n = 10)		Female (n = 5)	
	Freq.	%	Freq.	%	Freq.	%
ANX						
Normal	5	33.3	5	50.0	0	0.0
Borderline	4	26.7	2	20.0	2	40.0
Clinical	6	40.0	3	30.0	3	60.0
WID						
Normal	6	40.0	3	30.0	3	60.0
Borderline	3	20.0	2	20.0	1	20.0
Clinical	6	40.0	5	50.0	1	20.0
ATT						
Normal	2	13.3	1	10.0	1	20.0
Borderline	5	33.3	4	40.0	1	20.0
Clinical	8	53.3	5	50.0	3	60.0
AGG						
Normal	1	6.7	0	0.0	1	20.0
Borderline	3	20.0	3	30.0	0	0.0
Clinical	11	73.3	7	70.0	4	80.0

Table 8.9 reports the frequencies and percentages of trauma types experienced by children in the referred sample. Overall, 'Been hit, pushed or hurt by someone', 'Been hurt in an accident or sick in the hospital', 'Been threatened (someone said they would do something bad)', and 'Someone in the family has died' were the most prevalent experiences, affecting 73.3%, 66.7%, 60.0%, and 60.0% of children, respectively (see Table 8). A majority of the children had encountered five or more exposures to traumatic situations (86.6%), across four or more types of traumatic situations (80.0%) (see Table 8.9).

Table 8.9

Frequencies of Trauma Experience Types Reported for a Group of Clinically-Referred Children (N = 15)

Variable	Overall		
CTT Item	Freq.	%	Cum%
Car accident	4	26.7	-
Hurt/hospital	10	66.7	-
Other hurt	4	26.7	-
Family hospital	6	40.0	-
Death – family	9	60.0	-
Death - friend	1	6.7	-
Fire	0	0.0	-
Natural disaster	0	0.0	-
Adult violence	5	33.3	-
Divorce	6	40.0	-
Taken	2	13.3	-
Hit/hurt	11	73.3	-
Threatened	9	60.0	-
Family threatened	5	33.3	-
Robbed	1	6.7	-
Other scary	4	26.7	-
CTT (Total endorsed types)			
None	0	0.0	0.0
1 type	0	0.0	0.0
2 types	1	6.7	6.7
3 types	2	13.3	20.0
≥4 types	12	80.0	100.0
CTE (Total experiences)			
None	0	0.0	0.0
1	0	0.0	0.0
2	1	6.7	6.7
3	0	0.0	6.7
4	1	6.7	13.4
≥5	13	86.6	100.0

Table 8.10 reports the frequencies and percentages of post-traumatic symptoms experienced by children included in the sample. Only PTS items endorsed as 'Very true or often true' were included (see Table 8.10). On the parent-report measure, the most frequently reported symptoms were mood swings, arguing, concentration difficulties, and anxiousness, affecting 73.3%, 60.0%, 60.0% and 60.0% of the children, respectively (see Table 8.10). On the child self-report measure, the most frequently reported symptoms were worries about bad things happening, sleeping problems,

difficulty concentrating, and feeling defective, affecting 77.8%, 77.8%, 66.7%, and 66.7% of the children, respectively (see Table 8.10). Overall, 13 of the referred children (86.7%) fell within the clinical range for PTS.

Table 8.10

Frequencies and Percentages of Child Post-Trauma Symptoms as Rated by Mothers (PROPS) and Child Self-Report (CROPS)

Variable	Mother-rated (N = 15)		Child-rated (n = 9)	
	Freq.	%	Freq.	%
PTS endorsed items				
Mood swings	11	73.3	-	-
Repeats behaviours	7	46.7	-	-
Fights	6	40.0	-	-
Bossy	6	40.0	-	-
Hyper-alert	5	33.3	-	-
Picked on	7	46.7	-	-
In trouble	6	40.0	-	-
Fearful	4	26.7	-	-
Withdrawn	1	6.7	-	-
Startles	3	20.0	-	-
Quick temper	8	53.3	-	-
Argues	9	60.0	-	-
Secretive	3	20.0	-	-
Wets bed	1	6.7	-	-
Eating	5	33.3	-	-
Avoids	1	6.7	4	44.4
Concentrating	9	60.0	6	66.7
Bad memories	4	26.7	5	55.6
Spaces out	4	26.7	3	33.3
Too guilty/Blames self	2	13.3	5	55.6
Anxious	9	60.0	5	33.3
Irrational fear/Superstition	3	20.0	4	44.4
Clingy/Feel alone	2	13.3	5	33.3
Sad/Depressed	2	13.3	3	33.3
Worries	8	53.3	7	77.8
Nervous	5	33.3	3	33.3
Irritable/Angry	3	20.0	5	55.6
Doesn't care	2	13.3	3	33.3
Sleeping problems	4	26.7	7	77.8
Nightmares	3	20.0	4	44.4
Stomach	5	33.3	4	44.4
Headaches	3	20.0	4	44.4
Daydreams	-	-	2	22.2
Forget bad memories	-	-	3	33.3
Young for age	-	-	3	33.3
Sickness/Pains	-	-	3	33.3
Tired	-	-	4	44.4
I'm strange/different	-	-	5	55.6
Something wrong with me	-	-	6	66.7
I'm a jinx	-	-	3	33.3
Fear bad future	-	-	5	55.6

8.2.2 Bi-variate correlational analyses.

Due to the restricted sample size, limited correlational analyses were undertaken. Two measured associations reached statistical significance. The relationship between maternal RF, as measured by the PDI, and maternal RF as measured by the PRFQ

was significant, positive, and moderate ($r = .534, p = .04$). The relationship between maternal reports and children self-reports of PTS symptoms was significant, positive, and strong ($r = .779, p = .013$) (see Table 8.11). Six children did not complete the CROPS.

Table 8.11

Bivariate (Pearson) Correlations Among Variables

Variable	1.	2.	3.	4.	5.
1. RF PDI ¹	1				
2. RF PRFQ ¹	.53*	1			
3. Child Trauma ¹	.26	.09	1		
4. PTS Child Report ²	.57	.63	.52	1	
5. PTS Maternal Report ¹	.13	-.09	.42	.78*	1

* $p < .05$, ¹ $n = 15$, ² $n = 9$

Mothers were split into two groups based on their PDI-derived RF score. The low group comprised the six mothers who were rated as falling within the 'Negative to limited RF' range. The high group comprised the nine mothers who were rated as falling within the 'Moderate to high RF' range. The bivariate correlations between maternal-reports of child PTS symptoms and child self-reports of PTS symptoms for the low group ($n = 3$) were non-significant ($r = .746, p = .464$). The bivariate correlations between maternal-reports of child PTS symptoms and child self-reports of PTS symptoms for the high group ($n = 6$) were strong, positive, and significant ($r = .862, p = .027$).

8.3 Qualitative Analysis

The PDI was coded according to four categories of moderate-to-high RF response-types, each with a number of sub-categories, and seven categories of limited or negative RF response-types.

Step 4 and 5 of the IPA process (see Section 6.3.1) yielded six super-ordinate themes, each containing a number of sub-themes (see Table 8.12). In accordance with the IPA procedure to qualitative analysis, the themes that emerged were derived across interviews, rather than categories of responses provided for specific questions.

Table 8.12

Super-Ordinate Themes and Sub-Themes from Qualitative Analysis

Super-ordinate theme	Sub-themes
1. Mother's views of their children	A. Acceptance of child B. Child's difficulties as learning experiences C. Acceptance of own parenting
2. Mother's relationships with their children	A. Special child and special bond with child B. Intensity of the mother-child bond C. Child as central focus D. Mother as advocate
3. Mother's relationship with affect	A. Mother's own mental health experiences B. Ability to discuss negative affect C. Displaying affect in front of child D. Coping strategies for negative affect E. Self-concept as parent F. Mis-matched affect
4. Intergenerational patterns	A. Mother's early relationship with her own parents B. Independence and self-coping C. Intergenerational patterns
5. Difficulties faced by children	A. Social difficulties and rejection B. Taking instruction C. School D. Early life experiences E. Comprehension of own difficulties
6. Difficulties faced by families	A. Impact on family B. Impact on familial and other adult relationships

8.3.1 Mother's views of their children.**8.3.1.1 Mother's acceptance of their children.**

Mothers tended to be quite comfortable sharing adjectives that described their children. Despite the extreme nature of the behavioural and affective issues encountered by the mothers of these clinically referred children, mothers described their children in largely positive and often glowing terms, including 'creative', 'loving', 'funny', 'happy', 'intelligent', and 'social'. Two attributes, framed as positive, that were common across the interviews were reports of the children as being unusually sensitive to the needs of others, their mothers in particular, and being unusually mature or inquisitive for their age.

He is very caring about younger children. Umm, babies and toddlers. He always likes to, umm, you know, help them out and make sure that they're okay. And he's like that with a lot of his friends at school. (ID03, RF = 5)

He's very good with adults. They all love him. He's a very good conversationalist with them all. (ID13, RF = 5)

He is always wanting to help his teachers at school hand out books and worksheets. He likes to help with the cooking. He likes to help doing cleaning when he feels like it, just generally helpful ... Caring, he's always the first in to help someone if they're injured or upset. (ID09, RF = 6)

Negative terms were less frequent, and were often framed positively. For example, hyperactive behaviour was framed as 'energetic', impulsive behaviour was framed as being 'free', anxious and clingy behaviour was framed as being a 'mumma's boy', extreme mood swings were framed as 'complex', physical aggression toward mother was framed as 'impulsivity', oppositional behaviour was framed as 'stubborn', 'determined', or 'strong-willed', manipulative was framed as 'clever'. A sense that their children were a mystery also pervaded a number of the interviews.

He's very, free ... He does what he wants. When, you know... Impulsive, and, how he feels, he'll, yeah... (ID04, RF = 6)

I think just complex in the way he sees the world. There are different layers to J, that he just sees things differently in general, that just when you think you know what's going on, you don't really know what's going on with him in general. (ID13, RF = 5)

We walk through the shops and he still reaches for my hand. He's that sort of kid. Or, yeah, he does that, he just reaches for my hand and holds my hand in the shops. Even walking into school, and he's in Year 5, in front of all the kids, he doesn't care, holds my hand, yeah. (ID13, RF = 5)

Further, almost half of the mothers not only accepted their children's unusual or problematic behaviours and attributes, but they framed these as 'unique', and cited them amongst the things they liked most about their children.

They just give me... a lot of enjoyment, although, like, with B, she's a lot of work, and hard work, it's still something that I'm in for the long haul. And that doesn't matter to me. (ID06, RF = 5)

I like, I like all the little quirks, you know. I like the way he spins, spins his body! I like the way he flaps his arms! I like the way he ... almost, his eyes roll when he's really trying to think of something! (ID04, RF = 6)

What I love about him also just drives me crazy! (ID08, RF = 5)

The mother's views of their children tended to be somewhat unbalanced, with several mothers unable to acknowledge that there was anything about their children that they did not like. Difficult aspects were not considered part of the children's 'true' self. Negative aspects of situations were often glazed over to accentuate the positive. The reality of their full experience with their children was often not broached until the latter portion of the interview.

There's nothing I like least. (ID04, RF = 6)

*What do I like most about him? Everything. I love him. He's my son.
(ID14, RF = 5)*

Umm... that's a hard one because as a mother, I don't like to say that I don't like anything that I wouldn't... I am sad. It's not that I don't like it, I'm sad that she has got, like, psychiatric problems, psychological problems, umm, physical problems and developmental problems. I'm sad about that. (ID06, RF = 5)

She's creative, and she really loves her brothers even when she picks on J. Besides the behavioural problems, she's just perfect. (ID11, RF = 4)

*He's got a very beautiful heart, and he's got wonderful manners. He's got the best manners of any kid anywhere. He really has, yeah ... If he didn't worry so much and was just himself, if he could just be himself, well then he'd be, that's him, yeah ... but that's how he can be. If he allows himself to be himself, that's how he can be all the time, just, like, kind, you know?
(ID13, RF = 5)*

You know, and [earlier] I answered it by saying I'm not really worried about her, but then, I am really worried about her... (ID15, RF = 3)

8.3.1.2 Children's difficulties as learning experiences.

The rationale underlying the mother's acceptance of their children's extreme behaviour often included reasons relating to how much their children had taught them about

parenting, life, and acceptance. Further, the mothers felt they had come so far on their journey together with their children. The mothers seemed genuinely grateful for having had this opportunity.

He's taught me tolerance of other people. He taught me, you know, how I should be acting and thinking differently and, you know, just not taking a book by its cover. I mean, there's lots that I've learned from him. How to be a better mum to my other kids. He's taught me that. He taught me patience.

(ID04, RF = 6)

If I could change anything, it would be my son's aggression. I wouldn't change what's wrong with him, because I think that's what makes him who he is and he's going to be a good person and I know he will be. He's going to have a lot of problems, but we're going to- he'll get there. There was a reason I had him, he made- he makes me the person I am today that I never thought I would have been. (ID05, RF = 7)

But, since she's got the psychiatric problems and that, it's really changed my attitude... and, umm... before I didn't have as much self-care with my mental illness, and it's changed me to the point where I really... make, I, I care for myself and my mental illness, to keep myself well and everything.

(ID06, RF = 5)

Oh my God, I think that he's taught me so much. All the things that I thought I knew about being a mum in 20 years: Out the window! [laughs] ... So I honestly think that he was here for a reason, and that was to teach me something. (ID14, RF = 5)

I think K's my lesson, because I was not very patient before K. So I think that's- that was a lesson from God for me- you know, "You need to slow down and you need to be a little bit more patient." (ID12, RF = 5)

8.3.1.3 Acceptance of own parenting.

Similar to mothers' dismissing or minimising difficulties related to their children, approximately half of the mothers denied that there were any major changes they would undertake, if given the chance to re-parent their children.

I wouldn't change anything ... Cos if I change something, we would be on a different course, and we wouldn't, we wouldn't have the J or the me that we do ... because even the negative things, turned out to be a positive. (ID04, RF = 6)

To be honest, I don't think I would change anything ... I've come to the conclusion that it's not something I've done wrong, and I'm doing the best I can for him. If I could change the way he turned out, I would do that, but... (ID01, RF = 4)

Ahh, change...? ... Hmm... I'm not too sure... I wouldn't, like, I, nothing, because I've done everything I can for him, like, putting him in speech therapy, like, from kindy... Like, I can't change anything like that. I wouldn't, because it was the help he needed, so... [I: As a parent?] Me? Umm ... Probably the schooling. Like, not putting him into (school name) but putting into maybe (school name) ... Umm ... Don't know... [I: The relationship between you and E?] Umm... I can't think... Don't think so... (ID02, RF = 3)

I wouldn't change how I parent, because nobody is perfect ... But parenting - yeah, I've made mistakes, but I wouldn't take any of them back, I think that's how we learn. To be honest, everything I've ever done for my children has been for my children. So, I don't think I would change anything that way and, I don't- if anything, I'd like to have a good job. I wish I could work, maybe, sometimes. Sometimes I don't. Because I know that eventually I will be able to do that again. (ID05, RF = 7)

8.3.2 Mother's relationships with their children.

8.3.2.1 Special child and special bond with child.

Five of the 15 mothers described knowing that there was something different or special about their children from the moment they were born, or very early on in the relationship.

It's very hard to describe J, because he's so ... I've never met a child like him. Ever ... Right from when J was born I instinctively knew that, um, there was

something... I won't say 'wrong' with him, but there was something different about J. (ID04, RF = 6)

There was something about her, and the thought was that she's a really special child. She's going to make a really big difference in this world. I couldn't explain that but, just- She was this special little soul, and I couldn't quite explain what her- You know, but I just could see her being a really special child- Just felt this intense joy and happiness, and it was just lovely. (ID15, RF = 3)

Similarly, mothers described their bond with their 'special child' as 'special', and different to their relationships with their other children. Often, the relationship was described as bringing out qualities, instincts, or strengths in mothers that they never realised they had. Certain special behaviours were required in order to 'connect' with the children in the study. Mother's depictions of their ability to bond with their children were often described with a sense of pride and wonder.

He tells me that, if anything ever happened to him- to me, that he would just not want to live. Which is not a nice thing, but if I look at it, the positive- I know that he does feel close. Out of all my children, I- I feel close to all my children, but him more so, in a different way. Whereas, when I- we can sit down together now and not say anything and just feel close. (ID05, RF = 7)

We are very close. We have a very unique relationship... [pauses] Ahh... I don't know how to best describe it. Because- my instincts have come alive when he was born. It's like, I knew automatically what I needed to do for him, to, like, he might not, you know, he wasn't talking or he wasn't doing this, but I knew instinctively that, you know, I needed to do so-and-so or, so-and-so, it, it was just such, such an inst- he brought out such a... You know, I never had that with any of my kids, like, where I just knew instinctively that's, that's what they needed. (ID04, RF = 6)

And I had to, um, parent him differently to what I had to other kids. Like, I instinctively knew that, you know, massaging him and being gentle with him and, smiling at him and just talking in a soothing voice, I would reach him. (ID04, RF = 6)

Just- I don't know, I can't explain, but I know when she was born, because I got that instant connection bond. But I just remembered feeling like the luckiest girl in the world, and the happiest mum in the world. I just remembered laying in the bath with her one day and holding her, and it was just- I just had this feeling come through my body and these thoughts, and I held her and I looked at her and went "There's something about you." ... I just felt, like, a really strong connection ... And it's like I'm alive. You know what I mean?

(ID15, RF = 3)

The relationships also often took on a friendship quality, with the mother-child bond based on adult relational expectations, or parentification of children. Often, the children were described as initiating contact and affection, rather than the mothers.

We do a lot of stuff together. He loves shopping. He's like my mother. I've got to try to keep him out of the shops! We've travelled a lot together. We've done lots of - my husband goes on a surf trip every year, and when he does that, J and I - when I used to work for the airlines, we used to go off somewhere, London or something, because I used to get really cheap airfares. So we used to go and do some really great fun things, and go to art galleries and musicals and things like that. (ID13, RF = 5)

I don't know whether it's healthy or not, but she's treating me more like a peer than a mother. She's treating me like we're friends ... We've got- which we've never had before- She is, she is treating me now, like, I'm, I'm her friend. [I: And, this friendship relationship, you know, that you've got, how would that affect her?] I think really well. (ID06, RF = 5)

[About 6 year old child] He's a great conversationalist. He's fun to be with most of the time. He can be quite serious, but yeah, he's still fun to be with because he's interesting. I guess he's interested in so many things, and so it's easy to take him somewhere and show him something and for him to take a lot away from it and be able to talk about it for a long time and, you know...

(ID10, RF = 4)

When I was sick he was trying to help and, even though he was sick as well. He was good cause he was really sick and, he was dealing with that on his own

because I was sick. So it was- He knew. It was good. [I: So he was trying to care for you, in a way?] Yeah. By caring for himself while I was sick. (ID02, RF = 3)

But he'll always ring me. It doesn't matter where he goes, he'll ring me that night just to have a bit of a chat. It will only be like a two minute quick chat, but just touch base and have a quick chat. (ID08, RF = 5)

[When child is staying with father] Occasionally now he will call me and just tell me during the week that he misses me, and wants to see how things are going... (ID03, RF = 5)

Mothers were often protective and defensive of the relationship. Encountered parenting difficulties were often attributed to external parties. Children's negative affect was often framed as being directed at a particular situation, rather than the mothers personally, or as a result of harmless misinterpretations.

We always feel in harmony ... [I: So, what gives you the most pain or difficulty as a parent?] Other people. Other professionals! ... I'm over it now. I'm, like, people are going to think of me whatever they want, and, I mean, if that's what their opinion, they want to form, well, that's theirs. (ID04, RF = 6)

We're very close. Sometimes he thinks he's in charge, a lot he thinks he's in charge. I don't know, other than that, we are, I don't know, we're very close, we're very - we're close, but then he has, I don't know, he had this other side of him that rebels against me. I don't know what else to say ... [I: Has there ever been a time throughout J's life where you felt as if you were losing him a little bit?] No. (ID13, RF = 5)

8.3.2.2 Intensity of the mother-child bond.

In addition to the 'special' nature of the bond described between mothers and their children, the nature of the relationship tended to be described as emotionally intense, without respite, and restricted to the mother-child dyad. This intensity was one of the most pervasive themes running through the interviews.

I was his whole world, and he wouldn't acknowledge anybody else. He wouldn't let anybody touch him, he wouldn't, he would scream, he wouldn't... Even [father] couldn't... (ID04, RF = 6)

I couldn't leave the- She was on my- She was like my twin, Siamese twin. She would not get off my heel! She refused to go to the toilet without me, and it was all day from the minute she woke up to the minute she went to bed, she felt so unsafe. I just couldn't walk out of the room. (ID15, RF = 3)

Well, [laughs] the memory that brings about, is him screaming his, his lungs out, because I had to put him down to go to the toilet! I couldn't even put him down, to go the, to have a toilet break! ... It only stopped, like, when he was going to kindly. (ID04, RF = 6)

I desperately needed a break then because he'd had his heart surgery, he was always a very demanding baby, and I just needed, a friend of mine was going to London and she said "Why don't you come?" So I only went for 10 days because I got my discounts, and it did me the world of good to just take a break. My Mum had J, and J said he cried himself to sleep every night, and my mum said he did ... Mum said he cried every night. He said for years later "Why did you leave me mum?" (ID13, RF = 5)

He, umm, like on the train, he won't sit in a seat on, like, on his own, because he thinks he'll get kidnapped. He just has to be next to me. Or he, um, [sighs] um, I could be washing the dishes or cooking dinner, and he'll just come in and want hugs all the time ... Which is nice, but, it's clingy a lot. (ID02, RF = 3)

He worries enough that something's going to happen to me anyway - that's one of his biggest fears - so I can't tell him that, yeah, "Maybe there is something wrong with Mum." Maybe it's not a good thing, I don't know, but I'm not strong enough to deal with that. With all the other issues going on ... Even when he told me he was going to bomb the plane and kill me and everything else - didn't matter, I needed to have that break. Because I had a breakdown ... I've only ever had two breaks from him. The last one was something that I had to do, to be a better mum. (ID05, RF = 7)

[About 6 year old] He's never- because he's- yeah- because I've never been away from him. It wouldn't- there's nobody we ever could leave C with, so it's an impossible- but not that I really felt I've needed to be away from him, because he just goes on holiday with me or- so, no, there isn't really- there's no time when I've been separated for more than a day, from him ... He's never really done a play date where he's been gone for a whole day or anything like that. (ID10, RF = 4)

In addition, separation anxiety and guilt were pervasive, and were reportedly experienced by both mothers and children.

He was three, and we [mother and husband] went down south to [town] for two or three nights, had a lovely retreat, for my friend's birthday, and the second day there I just couldn't stop crying. ... I cried, and cried, and cried. (ID13, RF = 5)

D was four. We never had a honeymoon, because apparently I was pregnant with him, so we didn't go on a honeymoon. We decided to go to Bali for 10 days ... It was okay the first day. It was fine. But as time went on, it was very difficult. I felt like I'd lost him. I'd be looking for him all the time, and my husband would be going, "What are you doing?" Because I was so used to having him - not so much my eldest, because she was older and she'd be off - but we were always together, D and I - whether it was a good thing or bad thing. By the seventh day, I couldn't deal with it anymore. I had to come home. I just was very anxious, I had to talk to him three times a day. Yeah, it was very hard, very hard being separated ... Oh, it was awful! He was only four at the time, but he would cry for me every night, wouldn't sleep. (ID05, RF = 7)

[I: How long were you in hospital for?] It was it was about... 10 days, yeah ... She couldn't sleep ... She didn't eat. I, umm, my husband, R, brought her to the hospital ... She wanted to see me, she was so distraught ... I was really, really sick. I don't even know if I remembered her name or anything. And I had a couple of drips, and I had the oxygen on me, and I had, like, beeping machines. Like, I, I was very, very sick. It frightened her ... [Husband] said, she's, she didn't sleep the whole time I was in hospital. (ID06, RF = 5)

Any time that I go out without her, which is not very often, she really struggles with that. She struggles with saying goodbye. She's always worried that something's going to happen with me. So that- that I'm her- I'm her rock and she needs me ... She would always worry about, "Well, what if something happened to you on the way home from work to pick me up at school?", "What if you had a car accident and, what would happen?" (ID12, RF = 5)

[About being on holiday without child] It hurt. It really hurt. I thought I would be "Woohoo! This is awesome!" for the first time in- God, I don't know when I've ever not been with her. But, I really, really struggled ... I just couldn't do it. I just wanted to ... cry. That's what I did. I cancelled what we were doing, and that's just what I wanted to do. I really, really struggled. I couldn't wait to come back. (ID12, RF = 5)

8.3.2.3 Children as a central focus.

The special and intense mother-child relationships seemed to take precedence in the mothers' lives, often at the expense of her romantic relationships, career, and relationships with her other children, whose needs were often not acknowledged.

[Mother of four children] The first time we were, really separated, was, erm, when J got put into the hospital, err, for, um, cos he, he wasn't eating, and they wanted to put the tube in, and that's, that's when he started on [medication], and he was in there for about a month. And obviously, I didn't stay with him every day. Um, cos I had to go home and, you know, change clothes and stuff. (ID04, RF = 6)

Up until six months ago, I used to spend a lot more time with D. But I'm trying to be fairer in spending time with my other child as well as him ... It's something that you don't do on purpose, but I feel real guilt against- with my daughter. I'm crying here now, look. You try to be fair, you try to spend as much time as you can with all your children. Even with my daughter in [place], I wasn't there for her at one time when I should have been last week, because I was too embroiled in blooming- in D ... But they don't understand that, and- but, when they say things like, "You hate me", "You don't love me like you like you love D", that's really hard because then I think, is that how I make them feel? It makes me feel really guilty. (ID05, RF = 7)

There are lots of little times where I feel guilty. In particular sharing my time amongst the three kids. I'm very conscious of the fact that I've spent an inordinate amount of time with R in all aspects. Home life, work life, everything. ... I'm concerned about him enough that I changed my job to be at the same school that he was at so that I could assist staff with him. Ensuring that the strategies that they put in place not only helped him but also that there was a back-up for him to go, so that he could then be removed from people's- you know, without it having to be their problem with the duty of care then to me. (ID08, RF = 5)

Thirteen of the 15 mothers stated that addressing their children's behavioural and self-esteem issues before they reached their teen years was their primary focus. The pressure of this perceived critical window of time was described as distressing, and ever-present.

I worry about him socially, his happiness, his emotional state, that he might do something to himself ... He has done several things [suicide attempts], but I think they're more of a cry for help ... That's part of the reason why we're going away as well. Up in [City] we've got a place up there, yeah. I don't need to cook, I don't need to clean, and we've got all this time just to spend with each other, and just to do things. (ID13, RF = 5)

I think because he's just getting that little bit older, and his anger and frustrations seem to be more serious somehow. Maybe because he's understanding a bit more about life, but at the same time, not really getting it the right way round. I feel that I'm losing control of him. (ID01, RF = 4)

Well, I worry about his, his mental health, obviously... Umm, if he's, can be violent enough like that, then what's going on in his head?... You know, is he going to be able to grow out of it? Is he gonna be able to get control of it? Umm, I worry about him, maybe ending up in prison... Umm, but mainly my first worry, is to keep everybody [nervous laugh] else safe. (ID03, RF = 5)

But just caring about himself, because he's got very low self-esteem, is the hardest thing, and I'm always trying to tell him how wonderful he is and, he doesn't like it, but I'm hoping one day it will get through. (ID05, RF = 7)

He has such low self-esteem ... He gets picked on. He just struggles already at such a young age when he should be out having fun and enjoying life at this age. So he has already got so many worries and he already hates himself. So I worry about what he is going to experience when he is a teenager, and how he can handle that if he can't handle things now. (ID09, RF = 6)

I worry about her future. I worry about- that she doesn't have any comprehension, and that, yes she can read something- that's definitely improved- but she doesn't understand what it means. I worry about her working. I worry about her being self-sufficient. I worry about her being taken advantage of. I worry about her being easily led because she so wants people to like her. That really, really scares me (ID12, RF = 5)

8.3.2.4 Mothers as advocates.

Mothers reported that they felt they knew their children and their children's behavioural patterns best. They encountered much frustration and guilt trying to encourage others, including their husband or partner, school staff, mental health professionals, hospital staff, and other parents or members of the community to understand, interact, intervene, assist, teach, and discipline their children in specific ways. This ongoing responsibility and associated guilt seemed to be shouldered by mothers alone.

I suppose, giving people, erm, or sharing my views on J with other people, gets me frustrated. Um. Because, they don't 'get it,' or they don't 'get it' in the same way that I do. Or, you know, trying to get other people to listen, say to approach J like this- ... That's been very frustrating for me ... I felt guilty, because I felt like I let J down in not getting the point across about him. (ID04, RF = 6)

All the grandparents started to say she's annoying. People couldn't understand her ... and everyone just said "Get her away from me." I'm not going to let that happen. I started to stick up for her and, you know, stick up for myself. (ID15, RF = 3)

[About school staff] I want them to understand that he's struggling socially, struggling with his anger and frustration. Therefore, don't him just punished for

everything he does. I want them to be able to talk to him and talk through it with him rather than just punish him. (ID01, RF = 4)

I think because I've had so much intervention for him and I'm the one who's done 95 per cent of it, he and I have an extremely close bond ... He's still quite dependent on me explaining him to other people. People just don't get him. (ID08, RF = 5)

8.3.3 Mother's relationships with affect.

8.3.3.1 Mother's own mental health experiences.

Approximately half of the mothers described a history that included mental health experiences. Anxiety and depression were most commonly encountered. Experiences of loss and exposure to potentially traumatic situations were described. Some mothers reported the impact that these conditions had on their children, often framing parentification in positive terms.

I had a car accident ... I used to get panic attacks and stuff like that. When I eventually did get myself back on the road, J would notice if I was slowing down, or he would sense that I was having a bit of difficulty or whatever, just slowing down and just taking my time on the road. He'd just say "Mum, what's your favourite colour? What's your favourite song?" Just "Are you okay?" Just diverting my attention from what I was doing ... I thought that was, he's pretty in tune with making sure I'm okay. (ID13, RF = 5)

I had postnatal depression after M was born. So I felt that when she was around one year's old, it was just that sort of boundary issue, you know, like, I wanted to set boundaries, but kind of didn't know how. So, I often would just let the kids just run riot, or run over me - walk all over me, and become quite - very demanding. I would just constantly give in to it. (ID15, RF = 3)

Umm... I've got bipolar ... Yeah, with me, yeah, umm... If I've been like, really, really manic, and that I've had to be hospitalised, or if I've been really, really, really depressed, I've been hospitalised, but, basically, I just try and cope ... And, like, I'm on the disability pension. I can't work. Umm, I got, umm, diagnosed really late in life ... Basically, umm, the children... saved my life.

Like, when I'm so, so low... even though I have, like, with my bipolar, I have, like, attempted suicide and that, it's like, as I'm getting better, it's like, it's my children that, it's like "No, I have to stay. I've got these kids, and they need me, and, I have to stay well" (ID06, RF = 5)

I realise that all my life I've been quite highly strung and highly anxious ... But then when I ended up getting help myself and realised that I was actually suffering from depression as well, and started getting some of my own individual help, it wasn't just all about R ... A lot of my anxieties I was actually putting on him, which was exacerbating him more which resulted in the behaviours that we were seeing as well. So, it wasn't just his own anxieties he was dealing with, it was mine he was dealing with as well. Which, you know, for an eight year-old kid, was just full on. (ID08, RF = 5)

[About domestic violence exposure] To be able to still be my character, and to be, with what I've been through, I guess. I feel proud of myself because I've been able to stand on my own two feet against what people thought I couldn't, and I- yes. So for me, mine is I've been able to support my children and I've been able to- I've done this myself. That's- I'm proud of that. (ID12, RF = 5)

8.3.3.2 Ability to discuss negative affect.

A majority of the mothers had difficulty describing their negative affect. Language use often became disjointed or muddled, or a positive spin was introduced.

[About hospitalised child] Um, it was hard, but... it was a blessing in disguise. (ID04, RF = 6)

Obviously, my concern is for their safety and wellbeing, and they have been invaded, they have been traumatised, and they've been made to feel very unsafe. So I guess long-term, you do worry about their future. I'm not highly concerned and highly worried because I know they're going to be okay. You do worry about - I shouldn't say 'worry', because I'm not a highly worried person, but I do think about if they're around types of people who bully them or, you know... (ID15, RF = 3)

[Asked to describe child's oppositional behaviour] Yeah, yeah. I just have this memory that kind of goes... blank when I know I'm going to, um...

(ID15, RF = 3)

In particular, angry feelings related to parenting their children were minimised, denied, or attributed to entities external to the children, the self, or to their own past experiences.

[I: Describe a time in the last two weeks when you've felt angry as a parent] In the last, err, two weeks, I was actually, um, a bit depressed ... I was angry at [Clinic]. Cos I don't... think my, umm, my ins- aw, my, err, idea of him being Autistic was taken seriously enough. (ID04, RF = 6)

[I: Describe a time in the last two weeks when you've felt angry as a parent] I haven't really. The last couple of weeks I haven't ... No, look, I used to feel a lot of anger. I think it was just coping and stuff. It was just the coping. I'd say the last time I felt angry- And I know this was attached to some old stuff here- But it was where M had her tonsils out ... and that kind of brought back old memories of being in hospital and feeling alone. Because my Mum never visited me, and when she did she was- It was all image, it was just pretend. She was just playing a mother, and turned up before my operation, and I woke up when she wasn't there and, you know. So it did bring up a lot of that stuff. (ID15, RF = 3)

I haven't really been angry, I don't think, in the last- I don't think I've been angry this week or last week ... I'm a bit annoyed with L's school? [laughs] ... I can't really think of... No. I honestly, but I do not get angry with L when he even has his big outbursts. I don't get angry with him. If anything, I get kind of upset. But I haven't- the only thing I can think of which has anything to do with the kids, it was the dog, like, emptying the rubbish bin. (ID14, RF = 5)

Yeah of course, when he hit me the other night, or when he pushed me on the ground and I got carpet burn on his carpet in his room, so of course, yeah, and having to do this [gestures] to protect myself of course ... Well, I don't - I suppose it's anger. It's frustration. Yeah, I suppose it's anger as well. I'm frustrated, angry. I shouldn't have to put up with that. (ID13, RF = 5)

[I: How were you feeling at the time?] Frustrated, just very frustrated that you have to keep repeating yourself to her so often. [I: Any other feelings?] No, just frustration. (ID11, RF = 4)

I'm not really an 'angry' kind of person. 'Angry' is a strong word. I can't think of a moment recently ... I think that 'angry' is just a big waste of time. (ID09, RF = 6)

'Anger' probably wouldn't be the word. 'Disappointment' would have been more of the word ... [I: So what would you say the kinds of situations are that make you angry?] When I'm not heard ... Yes, that annoys me. When I'm ignored. When I'm disrespected. That definitely- it disappoints me, and it annoys me. (ID12, RF = 5)

Discussions about own and children's negative affect, and occasionally own positive affect, was often avoided or limited.

Last night he came from the shower and he goes "You don't like me, do ya?" And I said "Of course I like you, but I don't actually have to like you because I love you heaps" and he goes "Aw, you just don't like me" and I'm "What makes you think that?", "I don't know" and I just walk away from him because it's silly. (ID02, RF = 3)

Umm. I generally try not to talk to K too much... After he's calmed down, and it's all sort of over and done with, I try not to talk to him too much about what had happened ... It will set him off again, and he will feel shame about it, and guilt, and then we end up in all sorts of trouble again. (ID03, RF = 5)

[I: How did that feel for you?] Probably satisfied as a parent that C was doing something that he enjoyed. I was doing it with him, and the rewarding instance of him behaving in an appropriate manner. (ID10, RF = 4)

Approximately half of the mothers had difficulty acknowledging that their children felt any emotions other than anger.

The only 'upset' I see with M is anger. I can't actually say I see 'sad'. [I: Except for that recent time with the guitar strap? (suicide attempt)] Yeah, but he was so angry before he got there... (ID01, RF = 4)

It depends. He could cry or he could just play up and take it out on someone else. He doesn't generally talk about 'sad'. 'Sad' is not an emotion he talks about. He usually says 'angry'. (ID09, RF = 6)

I don't think he really gets sad, he gets angry. (ID02, RF = 3)

Umm... [pause] ... It's quite a hard one, I'm just trying to think... I mean, normally I would just say he becomes violent, umm, aggressive, umm, he doesn't really tend to have many emotions besides those ... It's very hard to, to be caring towards him, when he's upset, if he's trying to... gouge out your eyes, and punching you in the head, umm. You can't be nurturing to him when he's like that. (ID03, RF = 5)

But he just- he gets very angry. It's like one response for everything. (ID05, RF = 7)

8.3.3.3 Displaying affect in front of children.

A majority of mothers reported that they believed that their children did not understand their emotions, were confused by their mothers emotional states, or were unaffected by their mothers emotional states.

[About 8 year-old's knowledge of mother's emotions] I don't know. I think he's a bit too young to really understand that they're there yet. (ID03, RF = 5)

I don't know if he picks anything up. It's like he just doesn't notice anything. So whether he's good at just pretending not to notice, I don't know. Or whether he doesn't notice. (ID01, RF = 4)

I don't think he can care about how I feel most times, and I've learnt to live with that ... I don't know. I don't think it worries him, to be honest ... I just- I don't think he knows as in 'knows'. I tell him, but I don't think a lot of it sinks in. Do you know what I mean? Because, he sort of looks at you a bit blank

sometimes, and you hope sometimes it might go through ... But, when I say about my son that he doesn't care, it's not because he doesn't want to care - because I think that's horrible- I just don't think he... I don't think he gets it, to care. It's not done on purpose. Which is probably the hardest thing for people to understand. (ID05, RF = 7)

Which, like, you know, no matter how angry or upset I am, or whatever, just put a smile on my face ... Whenever I deal with J, I always have a smile on my face. And, no matter what I'm feeling inside, I don't let it show, cos it just confuses him too much. (ID04, RF = 6)

Contradicting both the reported denial of feeling negatively about their children, and the belief that their affect had no impact on their children, 10 of the 15 mothers also described hiding, or trying to hide, negative affect from their children for fear of triggering their children, or further escalating problematic behaviour.

I'm scared I'm gonna lose him... to that... where I won't ever be able to reach him... He shuts down majorly... I get scared because, you know, sometimes it takes me really long time to coax him out, and... You know, and... yeah. That really scares me ... It's almost as if he goes into, like, a mini-coma... (ID04, RF = 6)

But we, because of his issues with self-harm and stuff, we're very careful about- Maybe we could be firmer, but I suppose sometimes I'm worried about being firmer, because I don't want to, because he's just so up and down that, yeah, other kids you could probably be firmer with, but with J you have to be careful with it. (ID13, RF = 5)

Yeah, I just think anger is a waste of - I mean, it is an emotion and you do have it. I just think it's a waste. It's like jealousy, it's a waste of an emotion to me. The only person that's angry is yourself, and it doesn't benefit anybody by being and getting angry with J, if you get angry with J, then he gets angrier and it just builds and it builds and it builds, and it doesn't go anywhere, so I try not to. (ID13, RF = 5)

I can't even say that he would, ahh, be frightened of me, because he's not. If anything it actually makes him more aggressive towards me, umm ... So,

umm, when he notices that I've gotten angry, then he will tend to get angrier ... Umm, it doesn't work in calming him down, it doesn't work as in frightening him, where it's like, "Oh, Mum's lost it now, I'd better stop before it gets worse!" Umm, he will just keep fighting. (ID03, RF = 5)

Well, I don't let on to B ... She doesn't know ... I don't let on to her... Because, if I let on to her... that would cause her... a lot of frustration. Well, it would cause her anger. I don't know how you, with B, we, I try, aww, I try not to do things that cause her to be, that could cause her to actually have a episode, so that she actually got to go to hospital... to see medical doctors ... You never know what she's gonna- how she's gonna react ... You choose what, how I tell her, and react around her, about my feelings. (ID06, RF = 5)

I have to be really careful of my voice, because he always thinks that I'm yelling at him, when I'm not yelling at him ... That's definitely a trigger for him ... It just sets him off ... So even if I am annoyed or angry with him or something, I would have to be like, "Please don't be hitting your sister any more, L." (ID14, RF = 5)

A majority of mothers described their reactions to intense sadness or violent, oppositional, or self-harming child behaviour as being patient, calm, controlled, and thoughtful, with behavioural management strategies in mind. At times, this seemed to render mothers' responses largely cognitive in nature, rather than remaining emotional or connected to their children during these difficult situations.

I have to come up behind him because otherwise he hits me, and I just cross his arms so he can't hit me with his arms. If he won't get up, he quite often throws himself on the floor, and if he won't get up off the floor and go himself when he's given the warning, I take him by the arms and- he spits at me all the time. He spits on me. I think it's, like - I think anger is not the word, it's just disgust. It's just, yeah, I don't get, I suppose maybe it's my medication, I don't get angry. (ID13, RF = 5)

Well, when she's upset I- ... It's asking M "What's going on?", or "Mummy can be with you, but I've-" and I don't drop things, because, like, if I'm doing the dishes, I'll just let her know "I'm going to finish doing the dishes, and then I'll come down." Even though she remains angry and frustrated, I just stick to that

because I'm trying to show her that that's what to expect next. Then, I follow- I make sure I follow through. So then she knows that I mean what I say.

(ID15, RF = 3)

[About child attempting suicide] I just- Nothing, I don't do anything. I just- I will apologise to him, but I didn't apologise to him about that because I didn't want him to think that, "Oh, if I do that again Mum might feel guilty." So, I didn't actually bring anything up about that. (ID01, RF = 4)

Most times, ahh, I just try to... focus on what's gonna come out at the other end, ahh... So, just, sort of, reminding myself that, you know, he's swearing at me and he's telling me that he hates me, and, umm, he'd be better off dead, to not take it too much to heart. Just to say that they're words, and just move on, umm ... Most of the time that's sort of how I cope with it. (ID03, RF = 5)

Ten of the 15 mothers described struggling with how to best express their angry feelings. The potential for angry maternal outbursts often seemed to be just below the surface.

Sometimes I don't cope very well, and then I end up yelling back at him, and we end up sometimes in fist-fights [nervous laugh] ... Half the time I hope that it hurts him as much as it hurts everybody else. To sort of, like, well, "See how you like it" kind of thing. Umm... my intellectual brain tells me that he's not in the right frame of mind, and that, you know, if it is hurting him, and it is not doing very well for his emotional well-being, and that, ahh, he will need that help to, to... I don't know, then he's going to end up in therapy for the rest of his life I suppose... (ID03, RF = 5)

Oh God, just when they piss me off, I definitely yell a bit too much ... Umm, I yell very loud, nah [laughing]. No, umm, yeah, if they just... sometimes, yeah, I do get angry and I can't stop myself sometimes, and I realise "Hey, I'm just glad that I'm not smacking them!", because I'd probably- would smack them too hard, but I am yelling ... Sometimes I just think "Oh, why did I do that?" and, um, yeah... Could be the wrong time of the month ... It makes me feel upset when I've yelled at them, if, if they've done nothing, even if they were just a bit too loud, and I just let rip, and I just, I feel bad... (ID02, RF = 3)

I just got so angry, all this anger just built up in my body, I actually - because I wanted to pick her up and throw her. I didn't but... That was the thought, and I actually felt my body shake, like, just as I went to- getting- like, I wanted to be forced. You know, really angry. Then, that's when I just went "Wow! I've got anger down there!", "There's some stuff there that I haven't sorted out." It's, and it's often come up with M, I felt she pressed my buttons right to the extreme where I would just get quite angry ... So that hospital experience brought a lot of that old stuff back, and then it was- it was an old memory of my mum doing that to me when she couldn't cope because I was so sick. (ID15, RF = 3)

I'd absolutely just get so angry. I, I end up like, yelling at her, and just, she knows I'm so angry, which then escalates it even more. (ID06, RF = 5)

I have never hit L. I haven't hit him for years. (ID14, RF = 5)

I will just walk away and try and get a lid on it. But there are times when, yeah, I just verbally express it! [I: You explode?] Yeah. Not often. Maybe two or three times a year, when I've had about a gutful, or if it gets to the stage where I know that I can't hold myself back. (ID05, RF = 7)

8.3.3.4 Coping strategies for negative affect.

Similarly to their feelings of anger, 8 of 15 described avoidance strategies for dealing with their negative, painful, or difficult feelings, and 6 of the 15 mothers could not describe any strategies.

Nine times out of 10 it doesn't make me feel like anything. I disassociate myself, from how I feel. (ID05, RF = 7)

Umm, I don't like to spend too much time with K. Umm, it causes issues later on, so, I umm, actually try to keep my distance from the kids as much as possible. Umm, they aggravate me, then I lose my temper and then, umm, if I can just let them do their own thing, and I'll just do mine, then the days tend to go better. (ID03, RF = 5)

I don't deal with it a lot. I don't really. I don't know, we were pretty robust as kids. We used to just, just being taught to get on and do things ... Then the

next morning you'd wake up, and you'd just get on with the day again, and you forgot what happened the night before ... Yeah, just get on and do stuff, but the feeling passes ... If you dwell on stuff too much, you grow it, you're tending to it if you... (ID13, RF = 5)

Sometimes I just put up with it, and could put up with it for several months. It's not easy. (ID15, RF = 3)

When I've yelled at them for nothing ... I felt guilty. [I: How do you handle your guilty feelings?] I just ignore it ... I feel guilty and I think "I shouldn't have yelled at them like that" but I don't apologise ... I just try not to think about it ... Umm, I try to, yeah, just relax and, not think about it. (ID02, RF = 3)

The angry feelings? Well, I just, basically, you, I just... [sighs] ... I take medication in the end. [laughs] (ID06, RF = 5)

Life's too busy. I don't have time to feel like that. I've just got too much to do in my life and, um, literally, I don't get any time to really sit there and ponder ... I try not to think about it. Um, yeah, it just makes me, um, [softly] feel sad... (ID07, RF = 0)

8.3.3.5 Self-concept as a person and as a parent.

Many of the mothers struggled to describe themselves as a person.

Oh my gosh... I don't know. I think I'm, am I? I suppose I'm caring, it's hard to describe yourself isn't it? I've never had to do that before. (ID13, RF = 5)

Similar to C, I'm determined. Don't ask me for an example, please. It's hard for me. I'd probably say I'm social as well. I don't know. (ID10, RF = 4)

Um... [pauses] ... Um, impatient [laughs] ... Um... Ahhh... No, not really... Nup... [long pause] ... Put on the spot, no, I can't think of anything. (ID07, RF = 0)

Usually following in the footsteps of one of their parents, mothers described themselves as being 'busy' or 'people-pleaser' types, who always had many tasks to accomplish.

Often their ongoing activities were described as being to their own detriment, or to the detriment of having quality time to spend with their children. Descriptions tended to be very practical, often lacking an emotional component. Sometimes, this appeared to be underscored by a sense of apathy or anxiety.

I'm pulled in many directions, I'm looking after everyone but myself, and the sad part is that I've known in the past that in these situations - and this has happened with not only my husband but also with my mother. She - you know that I tend to - it's like, I put their needs first before my children, and I'm last.
(ID15, RF = 3)

I think I'm normally pretty organised and, I don't know, just always busy. Just always, my Dad always described me as a busy kid. Always doing things, fidgety, probably a bit hyper. Always trying to, yeah, just organise things, whether it's, if it's birthday parties, or being involved at the school ... Earlier on in the year we had, and I don't know how I got- I got roped into it, but I couldn't say 'No'. That's what, I'm a person that can't say 'No' to a lot of, when people ask for things, I can't say 'No' either. (ID13, RF = 5)

Just, umm, just caring, like, even the jobs, I've just, doing the washing, to the cooking, to, umm, buying the clothes for her. I just love doing everything ... It just, it, it gives me a feeling of being needed ... I, ahh, umm, basically, I live for my kids, for my children. That's what keeps me going, is my children.
(ID06, RF = 5)

Despite a life often fully dedicated to their children, a majority of mothers struggled to define themselves as parents, or to describe their role in their children's development.

I felt with L I never got it right. I sort of feel like I failed him, because I didn't know what to do or- because I haven't been able to control him or manage him, and stuff like that as well. So I think that's- I don't know... (ID14, RF = 5)

Just a very, very difficult- really, from the time she came home to- for years. I really don't think I gathered a real connection where we both enjoyed each other until she was about... maybe three. I just- it was exhausting, it was tiring, and it was not fun. It was isolating, and it- yes. I felt completely

inadequate, and I felt like there was something wrong with me. Why can't- why do- I see other Mums and they find this so easy. What's the matter?

(ID12, RF = 5)

[I: Can you choose three adjectives that you feel reflect on the relationship between you and E?] ... [pause] ... Ummm... Loving... [I: Mhmm] Umm... [pause] ... I don't know... [How else would you describe your relationship with him, it could be at different times?] ... Friendly. [I: Friendly?] ... I don't know, yeah, I don't know ... [Can you think of another word that describes your relationship?] No ... [I: How do you think your relationship affects his personality?] I'm not too sure... I don't think- I don't know if it does...

(ID02, RF = 3)

I- Could you read the question again? ... I don't know. I just don't-

(ID15, RF = 3)

I don't think it affects it. I think our relationship more than- I don't think I'm affecting him in any way. Apart from maybe he thinks I'm over-protective, possibly. (ID01, RF = 4)

[I: How do you think your relationship with C is affecting her development or personality?] Umm, I dunno. I have no idea. That's your job isn't it? To work that out? I'm not sure ... But I hope, hopefully I just think, it's hopefully something she'll grow out of, and things will get better. I don't know ... I don't know, I'm probably guilty of making it worse. I don't know. I really don't know. I'm not a psychologist, I really don't know. I'm just a mother, and try to do the best I can. (ID07, RF = 0)

Amongst mothers who were readily able to describe themselves as parents, explanations tended to drift away from the self, or be quite behavioural rather than relational or emotional.

Gosh, it's always a hard one when you're asked about yourself isn't it?! ... I don't know... 'Caring', I suppose ... I'm a mother, I obviously care for my children, umm... [I: Can you give me an example?] Not in any particular terms... I mean, K hurt himself, and, umm, you know, I had to run home from work and pick him up from school and take him to the doctors the other day.

Umm, I suppose if I didn't care I would have said that he could wait till after school. [laughs] (ID03, RF = 5)

I'm a caring mother ... I think all the work I do to protect M, I don't think I could describe it any other way as that I care about him. (ID01, RF = 4)

[I: How are you like and unlike your Mum as a parent?] I don't know. I guess I get told I'm like her, but I don't know in what way. Maybe shopping. Things like that. Spending money when I'm not supposed to. [I: As a parent?] As a parent? I don't know if I am like her- I don't know. I don't think I have that motherly approach to things I'd like to have. I don't know if I do or not. I'd like to think I did, but I don't know if I do ... [I: Your Dad, how are you like or unlike him as a parent?] No, I don't know either on that one. (ID01, RF = 4)

I'm an active mother as far as, um, you know, getting medical or schooling or extra tuition or whatever help for them, so... (ID07, RF = 0)

8.3.3.6 Mis-matched affect.

Almost half of the mothers laughed, happily or nervously, after revealing difficult topics or describing times when their children were frustrated or upset by them. These mothers also tended to provide cognitive responses, rather than a description of any feelings aroused in relation to seeing their children in distress, even when the interviewer directly asked about their emotional experience.

He tends to be sensitive about things. I mean, I'm not sure where they come from, but he'll go "People don't like me", "No one wants to play with me..." "I don't have any friends", "You all hate me." Umm, I suppose, saying things like that, generally when he is in a good mood, umm, would show that he, in some way, feels rejection ... I don't know. Half the time I think he's just trying to make up conversation with me... Umm, yeah. [laughs] (ID03, RF = 5)

He'll go run into his room and just shut down. Because he feels that I'm rejecting him. When I'm just playing. So, I've learnt not to do that. [Laughs] (ID04, RF = 6)

[I: So, how do you feel when you see him upset?] Well, depending on what he's upset about. It depends on what he's upset about. Like I say, I acknowledge whatever he's sad about, but depending on what it is, I try not to dwell on it. 'Mean' mother. [Laughs] (ID13, RF = 5)

So she's just constantly doing it, constantly just trying to get attention through her behaviour, but it's always negative behaviour. So it's where- I still felt connected to her, but I deliberately didn't give her attention. I removed myself. So I would just walk away ... [I: How do you think she felt in that moment?] I would- I don't think it gutted her. I think she's actually- was quite happy, I think she responded well to it ... It is going well; I know that they're feeling safe, that's why. [I: So she feels she's safe-] Very safe. [I: So she would have felt safe in that moment, even though you were walking away?] Yeah. (ID15, RF = 3)

Um. I don't know. Maybe, because, um, sometimes they're scared to ask me something [laughs] cos they don't want me to get angry, or they might think that I'm going to, um, yeah... (ID07, RF = 0)

[I: What kind of affect do these feelings have on K? When you feel angry?] She gets very disappointed that she- because she doesn't intend to hurt me. She doesn't mean to, is what she says- you know, "I don't mean to, I'm just annoyed." She would never want to hurt me intentionally- she wouldn't do it intentionally. [I: So she would feel disappointed?] Disappointed in herself, yes. [I: Any other feelings that you think she might feel when you get angry?] When I get angry? ... I think she probably is a little bit scared. (ID12, RF = 5)

8.3.4 Intergenerational patterns.

8.3.4.1 Mother's early relationship with her own parents.

The great majority of mothers described a strict, distant, or difficult relationship with one or both of their own parents.

Umm, I found it very- because I came- as a parent, I, I didn't come from an affectionate home ... [I: Is there anything about your mum that you do want to

be the same?] No. [I: There's nothing?] No. [I: What about your father?] No. (ID06, RF = 5)

My parents left me the impression, like, that they had all knowledge and they had all power and I never used to see 'em as humans. We were kids, and we had to do what we were told, and that was the end of the story. And, you know, they weren't human. [Laughs] ... I had more of a connection with my grandmother than I did with my own parents. (ID04, RF = 6)

I don't know, like, before I was, before I turned 16 I hated my parents. And I hated Dad because he was always drunk and he would come home and be aggressive. And I think when he kicked me out of home, like, it was all better, after that. And I went away for a while, away to [city] and that. And after that I realised they're my parents and they're not gonna, you know, they're not gonna change, and they're hopefully never gonna die, so I'm gonna have to, you know, respect who they are. (ID02, RF = 3)

My family's so dysfunctional, it's not funny. It is shocking! (ID14, RF = 5)

Descriptions tended to focus on behavioural or practical aspects, rather than emotional or relational. Discourse frequently became disjointed or muddled.

Well, with me, when I was a child... Umm, when I was a child, umm, my parents refused to, umm, which they still do, [laughs], they refuse to actually, umm, help me with my with my problems, and that, and with B... I'll talk, she's, umm, when she has her, her episodes or problems and that, I can talk, sometimes I can talk her through, but umm, in some cases it is an ambulance and that to the hospital, but, umm, for me- What was the question again? (ID06, RF = 5)

By the age that my children are now, umm, you know, I was doing chores around the house. I had responsibilities. Umm, I would never yell at my Mum or, umm, at my parents. Umm... You know, the words "Wait till your father gets home" just still puts fear in me. Umm... I think that... a lot of my parents', umm, they parented through fear, a little bit. Umm, I did not want that for my children. I wanted them to respect me, rather than fear me. But, umm... I

don't know... I think I've lost sight of the question. What was the question again? (ID03, RF = 5)

I wanted to be more of a homemaker like my Mum was. She was great at cooking and I'm not a cook. The house was always spic and span ... She was very particular, and I find even now I fold the clothes how she did and I put the knives and forks and spoons in the same drawers that she used to. So there are a lot of just core routines that I have imitated from her ... Yeah, there are not many things that she did that I wouldn't want to be like. She was a pretty, you know, one of those typical Mums of that era that is a stay at home Mum and the house was always spotless. There was always a chocolate cake cooked and tea ready on the table when Dad got home. (ID08, RF = 5)

Five of the 15 mothers described their own mothers as women who put their children first and were caring parents. The relationships were usually described in practical or behavioural terms, with little or no description of the emotional aspects or bond between their mothers and themselves. The descriptions could also be very idealised and superficial.

She never raised her voice or her hand, and she was always able to give really good advice. Even as an adult daughter she was able to give good advice ... I don't really- There's nothing I don't think that I wouldn't like to be like her. She did everything right ... You just knew that she was a mum. I always had my friends say, "Oh, your mum is so cool, I like your mum." Things like that. (ID01, RF = 4)

Well, my mum always put us kids first. Above everything else. (ID04, RF = 6)

The nurturing, the loving, the giving, she'd do anything for any of us. She always put herself, both her and Dad always put us kids first, yeah. (ID13, RF = 5)

My mother was a very good parent. She was very involved and caring, loving, always there for us ... But at the same time, I don't think my mother could let go as well, so I think she limited her life to a certain extent and that we became her life. (ID10, RF = 4)

My Mum is nice and kind and she'll do anything for anyone, but then in saying that, she does everything for everyone and she's a doormat. Sort of the same qualities, but not as extreme as my Mum. (ID11, RF = 4)

In contrast, 9 of the 15 mothers described their own mothers as distant, strict, critical, maintaining high standards, or cruel. Caring was often shown via practical means, rather than emotionally or via affection.

[I: What qualities would you want to have like her?] None ... I don't want to be like her at all ... I mean, she's thoughtful, you know, she's- She'll go shopping and think "Oh-" ... if she knew that I was running out of something, and she did pick it off the shelf and give it to me. That's a big deal for her. I liked that thoughtfulness, but that's all that she'll really show as far as "I care about you." ... You know, look I'm- I just- I can't explain it. I just don't think she's a person. She just doesn't have feelings, and I have lots of them. So, I just- I know she's a person, but she's just- It's just- She's just so hard to figure out ... Even though she tried, it all came out as criticisms and put downs and, you know. (ID15, RF = 3)

She was a liar. She lied about everything. She took a lot of shit too, like, umm, she kept a lot of secrets from Dad so that we wouldn't get punished for it. So that was kind of nice of her, I suppose ... I wasn't the favourite. Like, I was just, I don't know. She didn't really pay much attention to me ... Umm... I don't, I don't know, she never- I don't know... I never liked her very much, so I never really took much notice. I really hated my Mum when I was younger, it was just a teenager thing I guess... Umm... [pause] I don't know, but I know that I would never cook like her. (ID02, RF = 3)

Yeah, I can't even remember very much about my Mum playing, or doing the activities with me, or things like that, but, umm... I don't know... How would I like to be more like my Mum...? Yeah, well, Mum was always there for me, umm. You know, if I was sick at school, she'd be there to pick me up, umm. I always knew Mum was at home, umm ... I don't know... I mean, as a person, there's not really a lot personality-wise that I'd like to be like my Mum, but, umm... ... [I: Can you give me examples about how different you and your mother are as parents?] The only way I can think of is that I work, and my

mother didn't. Umm, I suppose then, in a way, my Mum got the time to do all of the daily duties and stuff before we were home from school... (ID03, RF = 5)

My mother to me is superwoman. She brought up three children pretty much on her own. She's always immaculate ... She wore makeup all the time, she was a very proper woman, she was a counsellor - a very smart woman. She never judged me, but I never felt like I was ever good enough to be her daughter ... But in a way, she's very controlling. Very controlling. Like, if you didn't dust properly. That type of- oh yeah, housework is housework, everything had to be in its place. I'm not- I never wanted to be like that. (ID05, RF = 7)

I grew up in a one-parent family with nothing to do with my father. Growing up, I felt that my Mum and I didn't really have a connection ... I always felt that I was so much like my Dad, and that's why my Mum didn't like me. (ID12, RF = 5)

[I: How would you want to be unlike your Mum as a parent?] In every single way ... I never remember, like, hugging my Mum or anything like that ... I think I was about 14. So my Mum, who I don't even call M- I call her 'B'. She left. Left all of us. We didn't hear from her for, like, two years. Anyway, I think my Dad ended paying somebody to find her ... But ever since she's been back, I don't know, she's in and out of our lives. But she's hopeless. (ID14, RF = 5)

Eight of the 15 mothers described their own fathers as strict, distant, disciplinarians. Similar to the relationships with their mothers, relationships with fathers were usually described in practical or behavioural terms, with little or no description of the emotional aspects of the relationship or bond between their father and themselves.

He never really spoke to us... I knew he cared, so I suppose I'd like to be caring like him. But I would also- not the silent caring. He was more like the silent caring. Not the, you know, person with good advice, and talking, and ... yeah, he'd just punish. [Laughs] ... I know he cares and, you know, and he used to... But, he used to do it in such a negative way. Such a bad impact on me. Instead of trying to ... you know, if I came, came home with an 'A' he would ask, "Why not an A+?" (ID04, RF = 6)

Way back then he was an alcoholic, and, really strict, and that's probably why Mum kept a lot of stuff from him ... Like, he was always at the pub and he wouldn't eat with us. Umm. He would come home drunk and angry and yelling and put the stereo up loud even though he knew I couldn't sleep with music, and it was right near my bedroom. He'd just be obnoxious and rude, really yeah... Not a nice person ... And, my Dad used to, like, discipline us with the strap, the belt. I wouldn't do that to my kids. ... Umm... [pause] not much, I can't think of... Umm. I wouldn't drink... Yeah, I just wouldn't, drink like he did. (ID02, RF = 3)

My father was an alcoholic from a very young age, but wasn't a - wasn't a violent man. When my Dad worked away, I was allowed to express any feeling that I had. But when my father was home, you could not express sadness, you couldn't cry. You could probably express angry, but not to the stage where you were screaming at him because he would get very angry with that. But my father was very - a stickler for 'children are seen and not heard' type of parent. Don't get me wrong, I probably had the belt maybe once growing up, but nothing - I wasn't beaten or anything like that. But, you knew how to act when your father was home and when he wasn't home. (ID05, RF = 7)

As a parent, there really isn't much about my Dad that I would like to be like. Umm. Dad wasn't there, erh, he was always at work or at meetings... Umm, he was a big part of the State Emergency Services, so he was always out during the evenings. Umm, basically the only time I ever really remember spending much time with dad was, umm, at breakfast. Me and my brother used to get up to eat breakfast with my father. Umm, occasionally when he had a weekend off, he would go and mow the lawn and do all the other stuff and, you know, we'd be around him ... but, as a parent, ahh, he was pretty distant. Umm, he wasn't really part of the parenting of our family. (ID03, RF = 5)

Because I had a mental illness... I look back, and, it started, at a young age, like B. Umm, and, it was ignored by them [parents] to the point that... umm, when I was very young and attempted suicide, when I come home, my father got out the belt and belted me ... Because it had embarrassed them ... And... we, we were like, just, the way we were treated, the way, umm, it, it, my father was actually quite, like, belted us, quite a lot. If I couldn't turn the tap off

strong enough, he would belt me, and then, I found out later on that, like, the tap needed the washers replacing, and he had to replace the washers... It was just stuff like that... (ID06, RF = 5)

My Dad wasn't a very loving man. He still isn't a very loving man. He thinks children should be seen and not heard. Um, yeah, it was like that with me as a child, and he's like that with my kids as well. (ID07, RF = 0)

I can't really say there'd be anything about my Dad that I would want to be like. I supposed he did take us places as kids. Those things I would never want to be is... so detached. He just doesn't care. (ID11, RF = 4)

Of the 7 fathers not described as strict and distant, 3 were described as kind and caring men with a violent streak. Often, this behaviour was heavily rationalised by the mothers, and mirrored their descriptions of their children.

Yeah. I like my Dad a lot actually. I don't - my Dad was absent, so I don't like that ... No, but I like the fact he was just- he was just such a gentle person, and he just was so kind and caring, and he loved helping people, and even though he struggled doing it with us kids, you know, there was qualities about him that I really liked ... Because my Dad had the same sort of outbursts, you know, but he was this gentle guy, he'd take too much on, you know, couldn't say "No." He wants to be loved, you know. But his aggression would just be severe. He physically hurt me sometimes, and not like what you've seen in the paper and on TV, but you know, he's split my ear because I had thick hair, and he'd done that on a couple of occasions, just lost his temper. Apparently when I was a little girl, I went to hospital because he dislocated my arm. But I don't remember that. He feels extremely guilty about that. (ID15, RF = 3)

My father, again, was very involved and caring and loving, supportive. He always found time- even as a father- always found time for us, had a lot of time with us ... But my father did have a temper and could be very sort of intense, and could get upset about something and not let it go. (ID10, RF = 4)

8.3.4.2 Intergenerational patterns.

The nature of mother's descriptions of their relationships with their parents tended to mirror the nature of their descriptions of themselves or their relationship with their own children. Relationships were usually described strictly in terms of practical activities, behaviours, and physical contact, rather than emotional connection. Others were unrealistic or idealised. Further, in 10 of the 15 interviews, no real sense for the children's inner world was conveyed, or a limited sense of wonder or inquisitiveness about the children's inner world or experience was expressed.

[About mother] She was a good citizen. Did a lot of volunteer work ... [About self] I volunteer at [organisation]. I do a lot of voluntary work with children and if anybody needs any help, I'm always there to help them. I also believe that the- our law needs to be followed. We all break it a bit, but I'm- generally I'm- I like to believe that I'm a Good Samaritan or a good person. (ID05, RF = 7)

[Description of father] My Dad's a gorgeous man. My Dad's got a beautiful heart, very family. He'd do anything for us ... My Dad is really sensitive. My Dad is incredibly sensitive ... Dad used to have a bad temper. I remember as a kid he used to have a bit of a bad temper, the disciplinarian. He used to use the belt and the wooden spoon. [Description of own child] He's got a very beautiful heart, and he's got wonderful manners ... He's a lovely boy ... He's sensitive ... A very deep little boy ... J's impulsivity, with him hitting me. (ID13, RF = 5)

[About own father] There's not a quality that I like of him. I so wanted him to like me ... [About own daughter] She just so wants to be liked. She just so wants to be accepted. (ID12, RF = 5)

[About own father] I suppose he used to be, like, I mean, I do it now, I take the kids to the sporting thing, and I suppose he used to do that too when I played netball ... [About own parenting] Oh, like being a 'soccer mum' kind of thing. I'll take 'em to the sporting events and support them that way. (ID02, RF = 3)

Umm, well, normally when you have children, you know, you, you love and care for them, and are affectionate and, you know, you grow up together, and you have these beautiful... not so much obedient children, but respectful children, and then, you know, they go on to have their own families and have respect for, you know, everybody else... But I just, ahh, I don't have that. (ID03, RF = 5)

[I: Has there ever been a time in E's life when you felt as if you were losing him just a little bit?] Yeah, when he picked Ford over Holden. Yeah. He picked Ford for his Dad, and it's like "Oh bugger" but, no, I don't know, I don't think I've ever ... Yeah. It was disappointing. Because I thought he loved me more, and he would have chosen Holden, but I think he wanted to be on Dad's side, like, make Dad love him more, so like "Oh, I'll pick Ford with Dad" That's what it I reckon happened. And I am being serious, it was disappointing. (ID02, RF =3)

[I: Do you think C ever feels rejected?] I don't think so. I don't think he could... Yeah, I don't think it's anything that [husband] or I do or say or imply that would make him feel like he's rejected, and he's never really said anything. I think we're pretty careful. I don't think he would really feel that- yeah, no. (ID10, RF = 4)

We weren't overly spoilt with clothes, toys, and stuff like that. My kids are quite- my son has every technology known. [Laughter] (ID11, RF = 4)

Yeah. I'm not as involved. I'm involved- I wouldn't call it superficial level, but I'm involved in a more organisation level for my children. (ID08, RF = 5)

Displays of affect, and discussions around affect, were reported in the context of the mothers' own experiences of these as a child. The expression of anger in particular was reported as an affect that the mothers did not wish to repeat, though had trouble avoiding. Approaches to discipline were also a constant theme.

You know, when I was younger, my parents used to ... I used to think they used to be tough on me. And, I said to 'em, I would never treat my kids the same way. Like, sometimes they would, burst out in anger, you know. And here I am, in the shopping centre sounding like my mother! (ID04, RF = 6)

Like, I don't tell [husband] everything that's happened in the kid's life, because he doesn't... need to know, so that they don't get disciplined twice, basically. Because if I've already disciplined them, and I tell him, he will discipline them again. So it doesn't really need to be done. [I: So that's similar to what your Mum did?] Yeah. (ID02, RF = 3)

I guess sometimes because I shout a bit, and I don't show 'em as much love, I'll buy them things instead. Like, I'll go to the shops and get 'em like, you know, something or whatever, so. I do spoil 'em ... Yeah. Which coming back to that, is probably how I'm more like my father in that way as well. Instead of showing love, I'm buying them something. (ID07, RF = 0)

I do think the rejection side with her Dad definitely, because she just obviously doesn't understand that. I think I had that growing up, and I know that for me it probably took me into my 20's before I actually really dealt with that. The only way that I ended up- it ended up being dealt with for me was he died. (ID12, RF = 5)

8.3.4.3 Independence and self-coping.

Nine of the 15 mothers either denied that they had any emotional needs that were not being met, or stated that they did not ever feel they needed anyone to support them emotionally or take care of them. These mothers also preferred to be alone when feeling needy. Support that was sought was usually of a practical nature.

I do a lot of self-regulating. And I allow myself to, I don't really need somebody to take care of me, cos I do it to myself. (ID04, RF = 6)

I've learnt to cope. I cope with it actually quite well, I think. It's just frustrating. It's just when it's the impulsivity of the whole situation, and it turns just a normal, normal every day thing into a drama ... Yeah, I think I cope amazingly with it. [I: How do you do that?] I'm on Lexapro! [Laughs] (ID13, RF = 5)

[Single mother of 3 children] [I: Can you tell me about a time when you felt you really needed someone to take care of you?] When I was sick... And when I had to go to the police station and stuff, I needed someone there, for me, and... that's about it. (ID02, RF = 3)

No. God, come and clean my floors maybe! ... No, it's alright. [I: In terms of emotional support?] Yeah, no ... I'm alright. I've always got by. Always been fine, yeah. (ID14, RF = 5)

[I: Can you tell me about a time in the last week or two when you felt that you really needed someone to take care of you?] No. That's my answer ... I have moments where I would like to ring someone and talk to them about what's happened, but I don't think I need someone to look after me. (ID09, RF = 6)

This independence may have been a life-long trait, or one developed as a result of a majority of mothers being burdened with the responsibility of solely caring for their children, seeking help for their children, and implementing child-management strategies largely on their own.

I'm not one for lots of attention, if you know what I mean. Even birthdays and stuff, I'm not one- I'm not one that likes to ask for help, even though I'm happy to help whoever. I hate asking for favours of people, but if anybody asks me to do something, which has been pointed out to me before, that I'm more than happy to help. But I've always been very independent. I've always been very independent and, yeah... (ID13, RF = 5)

When I really needed someone to take care of me...? Umm. I've never really had that option before. Umm ... No. No, I can't really say I have felt that way. Umm. As I said, it's just, I think it's, you know, over the last six years I've been the one that has had to take care of everybody else and, umm... But, I've, I don't know. I've learnt to deal with that, and so I can't say that there has been a particular time, or especially not in the last few months, that I have thought that I just wanted somebody else to take care for me for a change. I can take care of myself. [Laughs] (ID03, RF = 5)

Just when I'm sick. I'm usually pretty self-sufficient. When I had B and J, I was a single parent for quite some time, so I'm used to doing it by myself. (ID11, RF = 4)

In 12 of the 15 interviews, there were few-to-no indications of any emotional or practical support offered by husbands or partners, other than providing income, or assisting as a last resort, such as when mothers were unwell or hospitalised. Often mothers had to turn to friends or relatives outside the family unit for assistance.

I go through a bit of grief or some depression in December, every year ... So, it's where- Yeah, look, I was reaching out to my husband saying "Could you

just help me out with one or two or three things?" and he was obviously going through a lot of stuff at work, so he didn't want to get out of bed and— But, you know, yeah, so ... Well, it [asking for help] just means sometimes it causes a bit of friction in the relationship, because then he feels guilty that he's not— Because I know he reacts - So, then he might put it back on me. So, I go "Fine, no problems" and then I'll run around and get everything done ... I got my 20 minutes to myself, so I'm happy. So why get upset? (ID15, RF = 3)

But at the moment I cry all the time, because I just can't - it's like you - just like a broken record, you're always like this. There's no one there for you. My husband- don't get me wrong, my husband tries to be there for me, but he's a shift worker. But at the moment, I'm not coping with that at all. (ID05, RF = 7)

Umm, just an example, I had pneumonia a couple of weeks- a few weeks ago, and I was in hospital for like 10 days or something, and, like, it was over the school holidays, and although my husband was doing the best he could, I got to the stage that I felt I couldn't recover in hospital until, I had to come home, because I was wondering- they were going go back to school- and all I thought was "Ok, I've gotta make their lunches" (ID06, RF = 5)

It may sound horrible, but I would tell her Dad that she wasn't his, [Laughs] so I didn't have to deal with him. Sometimes I just think she would have been better off not knowing him. I've always had it set in my mind, I've never been quite sure whether it's better for her to know him or not. (ID11, RF = 4)

In 9 of the 15 cases, husbands or partners were described as either actively denying their children's behavioural issues, struggling with, or refusing to comply with recommended approaches to managing their children's behaviour, or blaming mothers for the behavioural issues exhibited by their children. With regard to their role in assisting with their children, fathers or partners were not portrayed in a positive light in any of the interviews.

My husband gets angry, really angry with J. He's doing really well with noticing that. If you get angry, it doesn't, it's not solving anything with him. It just goes to another level which just escalates. (ID13, RF = 5)

Twice a month, every Saturday night he goes to spend time with his Dad, with his brother and sister ... I was a bit worried about it at first, because I wasn't there to protect him from [father] ... I even gave J a phone and said "Look, call me if Dad gets angry..." (ID02, RF = 3)

Umm, physically, his Dad has tried to take him a few times from me, umm... [long pause] ... Ah, well, [sigh] he tried to force the 'shared care' on me, to begin with. He just told me he was going to pick the kids up from school and have them for a week and there was nothing I could do about it. Umm, I knew that that related to money back then. Umm, and I just didn't think that he would care enough about K's problems to get him the help. (ID03, RF = 5)

He [husband] tried to explain to D why he said "No." He wasn't yelling and screaming, and D went ballistic. I said "I know he'll do that because he doesn't process like that." I knew he was going to go off, and even though my husband doesn't understand it, I do. (ID05, RF = 7)

He [husband] doesn't accept that R has an actual real, legitimate issue. He just believes he's being belligerent and rude and that's where we clash a little bit. (ID08, RF = 5)

8.3.5 Difficulties faced by children.

J says it's really tough being him. He just goes "It's really hard being me, mum." Yeah. I think it's tough for us, but it must be even worse for him. (ID13, RF = 5)

8.3.5.1 Social difficulties and rejection.

With respect to their children, a great majority of mothers described worries related to socialisation and bullying. Twelve of the 15 mothers expressed concerns that their children did not fit in with either their peer group or community, and struggled to form friendships. These mothers also described their children as victims of bullying and social exclusion, and stated concerns around the potential consequences, especially in relation to self-esteem. Rejection was experienced at school, within the family, in public, and within professional mental health settings.

Umm... She, she said to me she, umm, she said to me that... She thought I never loved her the same as the boys. She, she's talked about it. She said that she just always felt that, I, I never loved her...

(ID06, RF = 5)

That's, that's the biggest fear for me, is his, he just doesn't fit in anywhere, really. You know, like, he doesn't get invited to birthday parties, or, or to any, you know, like, other kids go to the park with their Mums. You know, they have a whole social group, and they go to the park after school. And he just doesn't get invited to any of these things. And, he's, he's, you know, other kids, erm, when the teacher's not looking at the end of the day, they make fun of him...

(ID04, RF = 6)

On a daily basis, little things would happen. I don't- it's either that she felt really rejected at her birth, and it's just stayed in her, or it's just she just doesn't have that understanding of things. So she just feels rejected... (ID15, RF = 3)

Since he's taking his medication he's lost a lot of his fitness and his stamina and he has to run around this big oval twice and he can't do it ... So, he'll say, "I can't do it again". Then the other kids sort of get up him and he doesn't feel like he's part of the team. He'll walk off and walk home. He feels like he doesn't belong ... That's how he feels rejection, when he says to me, "I don't fit in there." ... He doesn't feel he belongs anywhere. He said that to me yesterday on the way home, "I don't belong in this family, I'm different." (ID05, RF = 7)

He's never been able to have a friend, he's never been able to enjoy having a school friend. Playing basketball, little things like that. Or going on a school camp. Being able to go to swimming carnival. He's only ever done it once, because he's never been able to do that. Things like being able to go overseas, we've never done that with D yet, where other kids have. Going to birthday parties, things like that... (ID05, RF = 7)

He is always trying to impress everyone else. Probably because he hasn't had a lot of recognition for the things he does do. You get blindsided by everything else, you miss all those little things, all the little good things. (ID09, RF = 6)

Parents are cautious of him and won't invite him over. So he has the

friendships at school but that's it. He doesn't see anybody else outside of school and that's because the parents aren't comfortable with him being there because he's a bit unpredictable ... He's a happy-go-lucky kid, but he's still down on himself. He still calls himself an idiot, dumb, he sucks. He will still say things like if he was dead, life for the family would be a lot easier.

(ID08, RF = 5)

8.3.5.2 Early life experiences.

Children's lives were characterised by a range of early life experiences that mother's considered to be setbacks. These included difficulties in the mother-child relationship, multiple homes, poor or absent father-child relationships, parent separation, new adult partners staying with the family, and siblings with difficulties.

[About child's biological father] He doesn't have anything to do with K.

(ID12, RF = 5)

[About child's biological father] [I: You don't have contact with him anymore?]

No. Not since before L was born. (ID14, RF = 5)

She lived with her grandparents. That was the biggest mistake of our lives. I was unwell, and it was meant to be very short-term. Her grandparents took her on for- decided that they could help her. And then we had to fight, and we nearly thought it was gonna have to go to court to get her back, but in the end, we managed to get her back. And that had done a lot of emotional damage.

(ID06, RF = 5)

Her Dad and I's relationship, that wasn't good ... We've moved three times altogether. She didn't like leaving my Mum's house. She wanted to live with Nan forever. I don't think so. [Laughs] There have definitely been moments where it's been harder for her, the moving, and her Dad. I think it's, weekly with J's Dad, knowing that he comes every week to come and get J and her Dad doesn't. That guts her ... She gets just so disappointed, and doesn't understand why. It's hard for her to understand why these things have happened. (ID11, RF = 4)

My relationship with D from the time he was born until about nine was not very good. I tried but he was a very hard child, very hard, very hard. He was horrible. Basically, once he was nine and he was medicated, he was a lot nicer and we became a lot closer ... He had a breakdown when he was nine. He never talked to me, he was always angry, he used to nick money and go and buy things. He tried to set a fire. I just didn't understand him at all, he wouldn't talk to anybody. Then he'll- he tried to cut his wrists, so we almost lost him. He wanted the devil to come out. I had no idea what was going on with this boy. (ID05, RF = 7)

[Child bears a visual resemblance to mother] Yeah, and I just wanted - I know she felt rejected from me, because she started to look like me. It was just too much. I would actually find it hard to touch her sometimes ... It took until she was around two for me to actually look at her and go "You're beautiful. I love you for who you are, and you're going to be- You're a wonderful child and, you know, don't change." You know, but it took a long time just to get there, because there was this characteristics analysis, visual... I guess it was just a reflection of hating myself. So that does worry me a lot. I know that everything will be all right, but it's just... (ID15, RF = 3)

I didn't cope very well during the breakup. I wasn't really there for the children. I was feeding them and bathing them, and clothing them, and sending them to daycare and stuff like that, but emotionally, umm, [older daughter] was there for K, it wasn't so much me ... Well, I was going through my own thing, umm, pretty much as long as the kids were fed and taken care of, they sat in front of the TV, or they played in the garden. I didn't do anything with them, umm, which I used to do before, so, I stopped any sort of activity with the kids for at least 6 months, I would say ... He was 18 months, coming up to 2 years. (ID03, RF = 5)

Early hospitalisations, medical conditions, pharmacological interventions, sexual abuse, a number of deaths in the family, and other traumatic events were also common.

He was always a very, very difficult baby to settle, obviously, because of his heart issues ... I remember as a baby he used to wake up all the time, he used to wake up because he had heart issues ... I think I've probably been a bit of a

- what do you call them, 'hover mother'? - for a while, because J had heart surgery when he was small, and a nut allergy. So I think I made him a little bit precious in the early years. I think, yeah, I think that didn't help. He's on Lexapro as well. He gets anxiety. (ID13, RF = 5)

When he got the hand disease, on his hand, that's been a bit of a setback for him ... Umm. I think he was four. Or five. And he got [disease] on his hand, and he had to get it cut out, and because it's all scarred now, umm, I think it has- it is affecting him, even, like now he keeps wanting it fixed and hiding it. Like, he hates people talking about it ... Umm. And, like, his speech delay ... That's a pretty big setback, like, even now you can see it when he can't get the right word or something. [I: How does he-] Gets angry ... Anger. Anger. (ID02, RF = 3)

When he was very little, when he first, um, started coming out of his coma state... (ID04, RF = 6)

She had really bad sleep obstructive disorder up until four months ago. She had an operation, but up until then, you know, you worry if she was not breathing in her sleep, and coughing and choking. So, from a baby all the way up till then, she was quite a sick child. She'd have a lot of tummy problems, and she didn't - she had a lot of this, sort of, ears, nose, and throat problems. So, I did worry a lot about her health. I worry - this is where I get emotional, but I worry that I wasn't there for her when she was a baby. (ID15, RF = 3)

Um, most definitely. She, um, had glue-ear for the first twelve months of her life, um, she couldn't hear, so, she's been through a lot with, um, speech and, um, coming to speech and hearing for four years, and things like that, so, um, yeah, the kids been through a lot. (ID07, RF = 0)

At a very young age, with thinking about, he's had several deaths in the family with grandparents and stuff like that, and just the way he's tackled it, and the depth of feeling that he has there. (ID13, RF = 5)

His Nana ... was the respite person for us. She passed away a few years ago and that was quite traumatic on R. She was the one who did understand him when he was younger and got him through his really hard times. So that was a

massive loss for not only him, I mean for me as a Mum, but also- yeah she was the one and only person who could really take him off our hands for a night. (ID08, RF = 5)

My children, I knew that they had experienced trauma [sexual abuse], and that they were fearful, and I was very sensitive to that. (ID15, RF = 3)

There's an incident that we can't confirm but [agency] has spoken to him about possible sexual interference ... A couple of months ago we touched on it with agency. They spoke to J, and we thought that could be that's something hidden sexually, because J is very sexual, and the things that he says is just - I don't know where that comes from. (ID13, RF = 5)

Well, she had, umm... she, well, they, I think she was, like, when she was very, very young, she had the, umm, child protection, the, umm, sexual abuse thing. Umm... umm, she's had the, umm, complete, not learning ... The, umm, what is it? The, umm, academic failure. She's had thing, umm... what's ah- what's the question? (ID06, RF = 5)

She nearly drowned in [town] and ... She probably would have been about six-five. I was in shock. I was absolutely in shock. She was absolutely in shock as well. It was terrifying- it was absolutely terrifying ... Probably one of the most terrifying experiences of my life ... She thought she was going to die. She was definitely going under. She wanted to know how it would work- you know, where would her body go and- yes. So, she asked silly questions like that, but she would still bring it up today as something that was traumatic. She will never forget it. (ID12, RF = 5)

8.3.5.3 Children's comprehension of their own difficulties.

A number of the mothers described their children as unable to comprehend why certain behaviour was inappropriate, or why they acted or reacted in certain ways.

He's feeling scared. Because he, he doesn't understand why- All he knows is his body is, you know, his mind is telling him to flap his arms. He doesn't understand that, you know, he's doing it for a reason. So, I let him but, you know, sometimes I can get to him before he actually starts the process, but I

know once he's in the process I shouldn't be interrupt it, because if I interrupt it he has to start again. (ID04, RF = 6)

He couldn't understand why I wasn't taking him [to event]. It was because of his behaviour and I knew that if I took him his behaviour there would not be very appropriate. He couldn't understand that and just accused me of all sorts of things. Being mean and nasty and horrible, and ruining his life. (ID01, RF = 4)

If we go out somewhere and there are other kids, he generally gets looked at as though he is a bit strange, because he's all action and no words ... People just end up walking away or saying "No" and either he will join in or he just won't play. So it is quite often, I would say on a daily basis he feels rejected ... Probably wondering what he's doing wrong all the time, even though we keep telling him why things happen. (ID09, RF = 6)

8.3.6 Difficulties faced by the family.

Mothers described their children's behavioural difficulties as a major impediment to being able to undertake a range of activities, including leaving the house for school or appointments, attending shopping centres, going on family or parent-only vacations, having visitors to the house, leisure, or respite due to an inability to leave their children with others.

It's very hard when you get a phone call to say that your son has beaten the crap out of some boy because he called him a 'psycho'. My first response is, "Is the boy hurt?", "Will that parent assault me?" Which has happened in the past. Then- it sounds awful, but it's- the way my son feels is pretty much last on my list at the time, because I'm more worried about the other child, and if they'll press charges and if they are hurt ... If the parent finds out who I am, will they come after me? Then, obviously, then, once I've gone through all that, found out that's okay, then I have to deal with D. Because then D then becomes my focus, which obviously is very- is a very emotional, very draining time, because I have to watch the downside of his trying to hurt himself afterwards. (ID05, RF = 7)

But to go to any big shops, I can't take her alone. I have to have someone strong, because I've had, umm, a back injury and that, from a motor vehicle

accident, I physically can't. And because she's grown big, if she has an episode, umm, because I don't want to have to call an ambulance and the police. (ID06, RF = 5)

So, just utter frustration. Felt as if the family had been completely torn apart. So, utter despair ... We couldn't go out anywhere in public as a family group because he would do so many things that would just annoy people. (ID08, RF = 5)

Fears and concerns around the impact of their children's behaviour on mother's and their other children were also frequently raised.

Ohh, it's every day ... When he talks back to me... When he won't do what he's told... When he is violent... Because, as a parent I should be able to stop that... Umm, you know... The family life is supposed to be a fun place to be, and a safe and nurturing place, and it isn't ... That's what makes me feel terrible, that they don't have the family experience that the kids should have, because of the way that K is ... You know, I think that if I hadn't had K, you know, J and I were always very close, and I think that, you know, that life would have been different for us, should he not have been here... (ID03, RF = 5)

Well, sometimes it's because he just can be so unbearable. You can't- just don't even- I don't know, 24 hours a day seven days a week. I knew with my daughters as well, them just, like, wanting to sneak off ... Terrified for myself, you know, and my daughters as well, because he attacks them. So I would restrain him- have to restrain him, and stuff like that. I would always end up in tears every time ... L would hit me and my girls every- a couple of times a week. I don't mean slap or something. I mean he'd pull my hair out of my head. He'd pull me on the ground. He would head-butt me. He perforated my ear-drum. We'd lock ourselves in rooms, all the doors have got stab holes in them where he stabs, and stuff like that. (ID14, RF = 5)

My daughter gets harassed a lot because of who her brother is. It makes me- I've had parents go "You can't play with that little girl because of who her brother is." That makes me- it makes my blood boil, but I can keep a lid on that ... I have to obviously help her not have that stigma, because it's obviously quite, you know. One time I got very angry when this little boy decided to punch

her in the face because she was D's sister, gave her a black eye. That made me real angry. It's not her fault. (ID05, RF = 7)

When she's upset, she will, she goes for her younger brother ... She absolutely goes him ... She'll, she'll beat him up, she, all of a sudden she gets this absolute hatred for him. (ID06, RF = 5)

I have quite high expectations of [older child]. He's quite academic. He's quite sporty as well. He has a lot of natural ability and I see R who struggles with everything, and I'm firm with [older child] because he has all this natural ability and if he doesn't use it, he's mocking his brother basically. (ID08, RF = 5)

His mood swings and his temper ... They are just, I probably find it more frustrating because it rubs off on the other two children in the house, and I don't like them learning his behaviours and habits. That frustrates me. (ID09, RF = 6)

Mothers described the nature of their children's behavioural problems, or their own commitment to dealing with them, as having had an adverse impact on their current or past relationships.

I know that there were days when I was so frustrated at my husband, you know, that was- We've had quite a bit of relationship issues since she was born. Just the demands were just so high, and the expectations were so high of me, that there were days when I thought "Oh my" I just took it out on [husband], and I know I did. (ID15, RF = 3)

After I had D, I've never had very good close friends. I know a lot of people, but no one like I've met with this lady that I've met a year ago. We just - she just knows me, we're very in tune with each other, and I thank God that I found her. Because her father had bipolar as well, so she's very understanding with D and with me, and I can tell her everything and she doesn't judge me, which is probably the hardest thing. Because I feel a lot of people do judge me and my family. (ID05, RF = 7)

8.4 Discussion

In order to expand on the body of literature pertaining to the aetiology and maintenance of externalising behaviour disorders, and build on the findings of Study 1 and the pilot study previously conducted by the authors (Priddis et al., 2014), Study 2 had five aims: (1) report on the prevalence of child trauma and mental health concerns amongst a referred sample; (2) investigate the concordance between maternal reports and child self-reports of child PTS symptoms; (3) investigate maternal factors amongst mothers of a sample of referred children; (4) test the concordance between RF scores as measured by the PDI and PRFQ; (5) explore the thoughts, feelings, and experiences of mothers with clinically aggressive children in order to better understand the hopes, joys, struggles, and facets of daily life that are pertinent to this population. The findings pertaining to each aim are discussed below.

8.4.1 Child mental health diagnoses and clinical concerns.

In the present study, consonant with hypotheses (H1), at intake, 11 of the 15 children (73.3%) had been clinically diagnosed with at least one mental health disorder. Four of the 11 diagnosed children had 1 diagnosis, 2 had 2 comorbid diagnoses, and 5 had between 3 and 5 comorbid diagnoses. In the sample, ADHD was the most prevalent diagnosis, affecting 8 children (53.3%), anxiety affected 6 children (40%), ODD affected 3 children (20%), depression affected 3 children (20%), autism affected 2 children (13.3%), CD affected 1 child (6.7%), and PTS affected 1 child (6.7%). The four undiagnosed children were undergoing formal clinical assessment procedures at the time of recruitment.

This pattern of findings was comparable to those reported by Ford and colleagues (2000), who noted a higher prevalence of ADHD, and comorbid clinical diagnoses in a clinical population of children aged 6 to 17 years. Further, this pattern of results adds weight to the growing body of evidence pointing to the potentially problematic level of overlap observed between ADHD, ODD, CD, and PTSD (e.g., Ford et al., 2000). The results also supported Hinshaw's (2003) call for an investigative approach to behaviour problems that acknowledges disruptions to the optimal development of underlying regulatory capacities, rather than adhering to diagnoses and investigations based on the existing clinical nosology, an approach that was undertaken in the current research.

On the CBCL subscales, 40% of referred children fell within the clinical range for anxiety/depression, 40% fell within the clinical range for withdrawn/depressed, 53.3% fell within the clinical range for attention problems, and 73.3% of referred children fell within the clinical range for aggression. These findings highlighted the complexity of difficulties faced by children referred for clinical-level behaviours, and add weight to the need for interventions that address concerns beyond behaviour management (Priddis et al., 2014).

Finally, the patterns of behaviour exhibited by girls in the sample resembled those of boys, reflecting the findings of Shields and Cicchetti (2001), who suggested that although girls are often underrepresented in groups of severely aggressive children, those who do encounter extreme disruptions in early caregiving relationships engage in levels of overt harassment and aggressive behaviour designed to achieve instrumental gain that is statistically comparable to boys (Shields & Cicchetti, 2001).

8.4.2 Child trauma exposure and PTS symptoms.

Consonant with hypotheses (H2, H3), the family histories of children referred for clinical services in the current study were characterised by personal and environmental stressors. Of the 25 families invited to participate, 10 (40%) were not able to partake. In one family, the mother was deceased, one family had no contact with the mother, two mothers were suffering from severe psychological problems, and three of the children had been removed from the family home and placed in foster care. A minority of children lived with both of their biological parents. Maternal mental health experiences were common, with 80% of participating mothers reporting having experienced at least one type.

Quantitative data revealed that traumatic experiences were ubiquitous, with children reportedly encountering between 2 and 9 trauma types, and 80% encountering 4 or more types. The most prevalent types encountered were being 'hit or hurt' (73.3%), 'hurt or hospitalised' (66.7%), 'death in the family' (60%), 'being threatened' (60%), 'divorce of parents' (40%), 'family threatened' (33.3%), and 'witnessing inter-adult violence' (33.3%). Number of discrete encounters ranged from 2 to 27, with 86.6% of children reported as encountering 5 or more acute traumatic events. Qualitative data confirmed and expanded on these findings. Children's lives were characterised by strained relationships with their mothers, multiple or poor paternal figures, parent separation, deaths in the family, early hospitalisations, surgeries, medical difficulties,

sleeping, feeding, and speech difficulties, familial and peer rejection, sexual and physical abuse, suicide attempts, removal from the family home, siblings with difficulties, and mismanagement by institutions.

It would've been when she's gone to stay at her Dad's, and L and I had attended a wedding. I was just, you know, I've always sort of worried when she's gone over there. (ID11, RF = 4)

These findings were consistent with, and extended the findings of, Connor and colleagues' (2004) investigation of clinically referred youths, which reported histories that included physical or sexual abuse, familial alcohol or substance abuse, and parental violence. Child behaviour occurs within a family system, and child behaviour problems may be best addressed within this context, rather than in isolation (Bradley et al., 2008).

Together, the interpersonal and ongoing nature of prevalent stressors, and the potentially dysregulating familial environments encountered by the children in this sample, appear to meet many of the requirements for complex trauma (Courtois, 2004; Wamser-Nanney & Vandenberg, 2013). Contrary to expectations, however, associations between child self-reports of PTS symptoms, maternal reports of child PTS symptoms, and child trauma exposure, respectively, did not reach significance. The skewed, attenuated range, and small sample size may have accounted for this result.

As expected, PTS symptoms were pervasive with approximately 87% of the children falling within the clinical range. This finding aligned with, and extended, previous investigations of clinically-referred and anti-social youths (e.g., Connor et al., 2004; Greenwald, 2002). According to maternal reports of child PTS symptoms, children in the current sample were characterised by 'mood swings' (73.3%), 'argumentative behaviours' (60%), 'difficulties concentrating' (60%), 'anxious behaviours' (60%), 'quick temper' (53.3%), and 'worries' (53.3%). According to child self-report data, a similar pattern emerged. 'Concentration difficulties' (66.7%), 'bad memories' (55.6%), 'guilty feelings or self-blame' (55.6%), 'worries' (77.8%), 'irritability' (55.6%), 'sleeping problems' (77.8%), 'considers self strange or different' (55.6%), 'feels something is wrong with self' (66.7%), and 'fears of a bad future' (55.6%) were most prevalent.

Consonant with hypotheses (H4), overall, maternal reports and child self-reports of child PTS symptoms were highly correlated. However, on individual items, several notable discrepancies arose, with children self-reporting a number of symptoms markedly more frequently than maternal-reports of child symptoms. 'Bad memories' was endorsed by 55.6% of children in contrast to only 26.7% of mothers, 'guilty feelings or self-blame' was endorsed by 55.6% of children in contrast to only 13.3% of mothers, 'irritability' was endorsed by 55.6% of children in contrast to only 20% of mothers, and 'sleeping problems' was endorsed by 77.8% of children in contrast to only 26.7% of mothers. Only 'anxiousness' was endorsed by a markedly higher number of mothers (60%) in contrast to children (33.3%). This finding is important both theoretically and clinically. Child self-report of symptoms reveals an important array of difficulties that may go undetected by caretakers, or be weighted with less importance. Perhaps of most concern, child self-report data is collected in a minority of research studies, which instead tend to rely on parent-report, teacher-report, and clinician data.

Overall, these findings support the growing literature surrounding the concept of complex trauma, which posits that symptoms of early exposure can include emotional and behavioural dysregulation, impulsive behaviour, attention problems, disrupted consciousness, and interpersonal difficulties (e.g., Mongillo et al., 2009; Wamser-Nanney & Vandenberg, 2013). With regard to the current diagnostic landscape, neither the specific DSM-based diagnostic labels applied, nor recommended approaches to treatment, are modified in light of the presence or absence of salient environmental factors (APA, 2000, 2013). The current research indicates that the DSM's acknowledgement of the presence or contribution of environmental factors (APA, 2013) is warranted, though the presence of comorbid, or causal, post-traumatic stress symptoms may require explicit consideration.

8.4.3 Maternal factors.

8.4.3.1 Maternal RF.

As hypothesised (H5), in the current study, maternal RF scores derived from expert ratings of PDI transcripts ranged from of a low of 0 to a high of 7 (scale range -1 to 9). Categorically, one mother had limited RF, five had questionable or low RF, eight had ordinary RF, and one had high or marked RF.

Overall, the mothers exhibited a mean RF of 4.47 ($SD = 1.64$). This was similar to the

maternal RF value reported in Benbassat and Priel's (2012) investigation of a community sample of mothers of adolescent children ($M = 4.27$, $SD = 1.40$). Slade and colleagues (2005) reported a normally distributed range of RF scores in a community sample of 40 first-time mothers ($M = 5.74$, $SD = 1.51$). Mean maternal RF values were reported for infants with secure attachment ($M = 5.74$, $SD = 1.14$), avoidant attachment ($M = 5.4$, $SD = 1.36$), resistant attachment ($M = 3.0$, $SD = .00$), and disorganised attachment ($M = 4.3$, $SD = 1.57$) (Slade et al., 2005). The average level of maternal RF observed in the present study was markedly lower than that observed in the secure and avoidant groups in Slade and colleagues (2005) study, and comparable to the average amongst mothers who had a disorganised attachment with their infant. This is particularly of concern in light of Slade and colleagues (2005) claim that maternal reflective functioning constitutes a core capacity that determines both children's attachment security and the capacity of mothers to provide quality care and comfort to their children. The nature of the attachment relationship was not examined in the present study and represents an important avenue for future research.

Importantly, however, this result does offer two insights. First, while some mothers of children with clinical levels of behavioural problems do possess limited mentalising capabilities:

[I: And how do you think C felt last night, while this was happening?] Um... I don't know. You'd have to ask her. (ID07, RF = 0)

This occurrence was not universal. The interview transcripts provided numerous examples of mothers who were able to think reflectively about their own mental states, their children's mental states, and how these underpinned behaviour.

Now, I think he felt... very confused. It would have been awful to be feeling- he never knew what he felt. For him to be happy- being aggressive and violent, it can't have been a good thing. Even though he felt it was a good thing- because that's what he said makes him happy, was he when he was beating someone up ... Yeah, very confused. He would have been in turmoil. I remember someone saying to me, when he's acting out and becoming violent to somebody, imagine that rage inside him? He would knock four people off their feet when he was six, imagine that type of aggression inside- that anger inside a little person would be quite- it would be horrific. It's something that I couldn't, as a person, ever imagine. I can try to understand it, but I couldn't- I

don't think anybody can, unless they go through it themselves. But very confusing for him. Terrible. His favourite saying is "Why did you have me? Why was I born?" (ID05, RF = 7)

Second, RF represents a capacity that can be modified. Should improvements in RF be associated with the amelioration of child difficulties, all mother-child dyads in the current sample may benefit from growth in this area (Benbassat & Priel, 2012; Slade et al., 2005).

If my child's having a temper tantrum, instead of going "Oh, he's a naughty boy", now, you know, I'm thinking to myself: "Why is he having a tantrum?", "What's behind it?" and trying to... fix the situation from the other side, instead of just going "You're a-" you know, "Have time out" or duh-duh. You know, instead of just having a quick fix, it's, it's made me more, yeah, more thinking about, you know, and coming up with different ways of dealing with, with things, just by looking at the reasons behind, you know, instead of just going "Oh, he's being naughty," or "He's being difficult", or "He just doesn't want to co-operate", or "He doesn't love me." [Laughs] (ID04, RF = 6)

In accordance with hypotheses (H6), the correlation between maternal RF, as rated by expert scorers of PDI transcripts, and maternal RF, as measured by the PRFQ, was significant, positive, and moderate. This was the first known empirical validation of the PRFQ measure against the gold-standard PDI. Though qualitative measures tend to provide richer and more in-depth data (Smith & Osborn, 2003), they are also time-intensive and costly, requiring expert coders to analyse interview transcripts. A reliable questionnaire-based measure with adequate construct and content validity could greatly increase the number of studies seeking to investigate the RF construct, and add empirical data to this important body of literature.

Finally, as anticipated (e.g., Speltz et al., 1999), higher maternal RF was associated with strong concordance between maternal-reports and child self-report of child PTS symptoms. On the other hand, no relationship between maternal-reports and child self-report of child PTS symptoms emerged amongst dyads where the mother was rated as having a low capacity for RF. These findings suggest that, in the current study, mothers with a higher RF capacity were more attuned with their children, and were better able to reflect on their children's experience in a manner that was consistent with

the child's own reported experience (e.g., Allen et al., 2008; Fonagy & Target, 2003; Slade et al., 2005; Waters et al., 2010).

8.4.4 Maternal views and experiences related to the mother-child relationship.

8.4.4.1 Mother's relationships with their children.

Mothers retrospectively reported knowing that their child was special or different from birth, or very early on in the relationship. Often the mothers reported needing to adopt unique bonding behaviours, ways of being, use of physical touch, and feeding routines. Related to these reports is the notion of child difficult temperament. Studies have reported that child temperamental emotionality at three years of age predicts elevated likelihood of receiving a diagnosis of ODD and internalising disorders at seven year of age (Dunsmore et al., 2013). However, in line with one of the primary assertions of the current research, Perry, Pollard, Blakely, Baker, and Vigilante (1995) warn that the construct of temperament, as assessed in many investigative studies, may in fact be measuring the pervasive sequelae of early trauma, including the impact of adverse experiences encountered by the mother during pregnancy. Further, in line with the current research, Sharp and Fonagy (2008) acknowledge the importance of child temperament, but hold parental mentalisation as the primary determinant of attachment security and child mentalising capacity.

Mothers described problems with limit-setting and enforcement of boundaries for their children as a result of fear of triggering or escalating child aggression, and often in reaction to views of their own parent's approaches to discipline, which were considered overly strict or harsh. Further, in the interviews, relationships between mothers and their young child often took on a friendship quality, with the associated expectations of an adult friendship. This style of relationship tended to align with blurred role clarification, and children assuming the care-taker role, especially in cases where the mother encountered mental or physical health issues, and had few other supports. Indeed, maternal anxiety, depression, and unresolved loss and trauma were common, and often led to mothers framing child parentification in positive terms. Similarly, children were frequently described as the member of the dyad who initiated contact and affection, and was frequently characterised as being unusually sensitive to the needs of others.

Within the context of the family system, Garber (2011) suggests that intra-familial role distinctions and boundaries tend to break down in the face of circumstances that prevent the practical and emotional needs of a caregiver being met. These may include low SES, the absence of an adult partner, parental conflict, physical illness, or mental illness. The caregiver may turn to their children to meet these needs, in an interactional pattern known as *parentification*. Garber (2011) also proposed a form of parentification, labeled *adultification*, whereby parents enlist children to take on the practical and/or emotional responsibilities of a peer, confidante, and ally, in a partner-like role. These children tend to be verbally or socially mature (Garber, 2011), a characteristic that was noted in many of the children in the current research.

When the service of a caregiver's needs exceeds children's developmental capacity, parentification is considered 'destructive' (Nuttall, Valentino, & Borkowski, 2012). Indeed, children are often aware of the vulnerabilities in their caregivers (Parys & Rober, 2013), and may sacrifice their own needs for attention, comfort, and guidance in order to try to care for their parent (Hooper, 2007; Parys & Rober, 2013).

Interestingly, parents who did not experience their own parents as adequately nurturing are more likely to seek nurturance from their own children (Garber, 2011). Parentified children may experience internalising symptoms, including depression, suicidal ideation, guilt, anxiety, and social isolation (Garber, 2011). These symptoms were particularly apparent in the present study. An examination of child parentification may thus represent an important area for future research. Indeed, Hooper (2007) reiterates that, in the clinical setting, acknowledgment of the idiosyncrasies of each family, including the underlying function of the behaviours, roles, and processes between family members, is required.

8.4.4.2 Maternal experiences: Positives.

When she was younger and she was riding her scooter up and through the house, you know "Weeeeeee!" [Laughs] It was just one of the funny moments that she does where she does random things that you just don't expect.

(ID11, RF = 4)

Positive parenting experiences associated with raising a child who faces difficulties with aggression are often not addressed in the literature or measures of parental

experience. Rather, studies tend to focus on negative experiences such as parenting stress and difficulties in the parent-child relationship.

Interviews revealed a number of positive themes pertaining to the mother-child relationship that were relatively common across the sample. Mothers tended to be quite comfortable sharing adjectives that described their children in a positive light. Even negative qualities were often framed positively, or as 'unique'. Mothers frequently related that they had learnt a great deal from knowing their children, and from the experience of raising their children. In order to connect with their children, care for their children, or discipline their children, mothers reported that positive qualities were brought out in them that they did not realise they had, or that they were even capable of. Experiences of the self as caring, calm in the face of heightened emotion, tolerant, accepting, a protector, capable, important, resilient, strong, loving, loved, and special were reported. These discoveries of personal qualities were often described with a sense of pride and wonder. Despite ongoing difficulties and challenges, a majority of mothers stated that they felt grateful for having had the opportunity to get to know and raise their children, and, given the chance, would not change anything about their experience or children.

Taken as a whole, harnessing and accentuating positive experiences and any novel capabilities discovered within mothers of affected children provides one potential avenue for individualised approaches to assistance and support that has received little attention in the literature. Strengthening and building on positive attributes may be beneficial as a strategy in addition to interventions that narrowly target non-optimal parenting behaviours.

8.4.4.3 Maternal experiences: Difficulties.

It's like a zoo at my house before they even get in the car, and then when I was doing something inside the house, they were fighting in the car. So, it's just like, you know... It's exhausting. (ID07, RF = 0)

In some instances, however, mothers appeared to be using positive framing of their children's behaviour in an overly defensive manner. This may have prevented them from being able to acknowledge that there was anything about their children or their relationship that they did not like, or that there were any aspects of parenting that could have been accomplished better. Mothers also often found it difficult to acknowledge

that their children's behaviour was a representation of their 'true self' or 'true feelings' as this possibility appeared too confronting.

The full reality of the mothers' experiences were often not acknowledged or explored openly until the latter portions of the interview, once rapport and trust between mothers and interviewers had been established. At this time, mothers appeared to feel safe enough to reflect on their experiences and probe beyond surface-level or automatic responses, views, and attitudes. In line with Fung (2007), this important artefact of the interview process highlights the importance of employing semi-structured interviews rather than, or at least in addition to, self-report questionnaires.

Reinforcing the more commonly reported facets of parenting children with severe behavioural difficulties, mother-child relationships were almost ubiquitously reported as being emotionally intense, without respite, and coloured by pervasive guilt, maternal separation anxiety, child separation anxiety, communication difficulties, daily struggles around housework, homework, and personal hygiene. Further, distress related to their children's social relations, self-esteem, and future was reportedly ever-present. Leaving the house for school, appointments, or activities was a daily struggle. Shopping centres in particular appeared to represent very difficult environments for many affected children.

Mothers reported that their children's behaviour often precluded having visitors to the house. Child-free vacations were often not possible due to an inability to leave their children with others. Daily calls from schools in relation to child misbehaviour and aggression impacted on mothers' ability to engage in other activities during the day, including employment. In one case, a mother took a job at the child's school to provide constant availability.

Oh, it's just every day with her. Um, there's just not a smooth, easy ride. She's just hard work. Absolutely hard work for me. Um, and, just, I look at other families, and I just think "Gosh, it would be nice to have easy kids," but mine aren't easy, unfortunately. (ID07, RF = 0)

Further, this pattern of intense experience and responsibility for their children's welfare was reportedly unique to the mother-child dyad, with mothers solely shouldering the burden and being the only advocate for the interests of their children. Indeed, the intense mother-child relationship often took precedence in the mother's life, at the

expense of their relationship with their partners and other children, who were often not even mentioned during interviews.

8.4.4.4 Maternal experiences: Child-to-parent aggression.

Other than reports of child self-mutilation and self-harm, one of the more distressing experiences reported by this group of mothers was their frequent exposure to the physical, verbal, and emotional violence that their young children directed toward them. Mothers reported these common experiences to be immensely upsetting, scary, and dangerous, both for themselves and their children.

I've always been scared of boys. I'm still scared of boys. L just confirms that.
(ID14, RF = 5)

Pagani, Larocque, Vitaro, and Tremblay (2003) noted that child-to-parent aggression is a rarely documented phenomenon. The literature has only recently begun to acknowledge the detrimental impact of child-to-parent aggression (Calvete et al., 2013). In a large adolescent community sample, Pagani and colleagues (2003) found that parental divorce predicted a greater risk of child-to-mother physical aggression, while a positive family environment and healthier mother-child relationship mitigated the risk.

In the first known qualitative study into the experiences of mothers who were encountering exposure to child-to-parent aggression, Jackson (2003) interviewed six affected Australian mothers, with the goal of raising the profile of this under-reported phenomenon. The advanced age (14-16 years), male gender, physical size, and substance abuse issues of the children of these six mothers appeared to underpin a heightened version of the patterns of findings reported in the present study.

Interviews revealed that fear of their children, and both the threat of violence and the experience of overt hostility and violence, had become synonymous with the mothering role. Mothers reported feeling vulnerable, frightened, intimidated, under threat, concerned about their personal safety, and the need to create a safe space within their homes. Further, relationships with their children were characterised as strained, fragile, and tense (Jackson, 2003).

Bearing similarities to the present study, attempts at discipline and fears around letting their child's violence escalate, were constant sources of concern (Jackson, 2003).

Mothers in Jackson's (2003) study reported that they did not feel that their children intended to perpetrate the violence toward them. Rather, they rationalised that their children simply could not control their anger (Jackson, 2003).

Perhaps most concerning, Jackson (2003) reported that all participants had largely kept their experiences a secret, including from relatives and friends, citing shame and feelings of distress as sources of resistance to disclosure. In addition, all of the mothers stated that they were unprepared for this type of experience, and were not aware of its occurrence outside their own homes (Jackson, 2003).

Kennair and Mellor's (2007) review article concluded that more research was required to elucidate a clearer understanding of this complex phenomenon, and to guide approaches to intervention. In line with mothers in the present study, mothers in Jackson's (2003) study stated that they could have benefitted from supportive professional intervention (Jackson, 2003).

8.4.5 Potential for harsh or hostile parenting.

So, she definitely - and I do feel terrible about this - she's definitely experienced that aggression with me. I know that it's come from my, my parenting. The- Yeah, I'd always say "I'd never do what they [parents] did when they lost their patience with me." You know, there's these traits of, not really - it's the anger thing. It's learning how to express anger. I can express everything else, but it's the anger that I hold back, because I don't want to be an angry person ... And I'm not a physical person, but I just notice that I'll be taking stuff out on M, because of that frustration, and my Dad did it to me. He didn't do it to anyone else, but I was that person. I highly frustrated him. (ID15, RF = 3)

Mothers in the present study reported that the extreme behaviour of their children impacted on all members of the family both directly, through contact, and indirectly, through the time, planning, financial and emotional resources that needed to be exclusively dedicated to referred children. Indeed, children with behaviour disorders characteristically impose a significant disruption to the ability of a family to achieve and maintain a harmonious household (Frick & Dickens, 2006; Morris et al., 2007).

Undertaking optimal parenting practices and behaviours, including those pertaining to

parental reactions to child and own affect, may also become more challenging. Together, these factors adversely affect the emotional climate of the family, including emotional expressivity and marital relations (Frick & Dickens, 2006; Morris et al., 2007).

During the interviews, mothers both exhibited and reported a range of responses to recent instances of intense child sadness, frustration, violence, oppositional behaviour, and self-harming behaviour. A majority of mothers stated that they tended to respond to their children in a calm, controlled, and emotionally detached manner at these times, usually in an attempt to avoid escalating the situation, or for personal safety. Accordingly, during the interview, these incidences were often described in cognitive terms, and recollections of emotional responses during the incident were often omitted, even when directly probed for, and even amongst mothers who readily volunteered emotional responses to their children's behaviour during other portions of the interview.

This finding was notable in light of the attachment literature, which suggests that during times of emotional distress children are most susceptible to, and in need of, external regulation, security, soothing, and comfort (Fonagy et al., 2002). Further, while recalling incidences of extreme child distress, several of the mothers smiled, joked and laughed about, or attempted to minimise the seriousness of their children's affect, suggesting such incidences constituted a difficult topic to discuss. Interestingly, an undercurrent of maternal anger and aggressive impulses in response to extreme child affect appeared to reside just below the surface. Mothers vigorously denied that they would ever act on such impulses after voluntarily claiming that such feelings existed.

The denial of anger, and concerns around the appropriate expression of anger, were two prominent themes amongst mothers in this sample. Psychoanalytic practitioners, such as Yanof (2012), have offered interpretations of comparable behaviour from the mother of a clinically aggressive child:

Mother has a hard time seeing M as a vulnerable boy, because she is invested in seeing him as the aggressive one. Consciously he reminds her of her disturbed, out-of-control brother, who depleted the family resources; but at a deeper, unconscious level, M becomes the repository for her own disavowed anger. She cannot stay connected to M when he is angry, because he triggers her anger, and she cannot modulate her anger. Her response is to emotionally withdraw, re-enacting her mother's behavior with her as a child.

(Yanof, 2012, p. 117).

In sum, these findings appear to lend themselves to the notion of bi-directionality within intimate relationships (e.g., Morris et al., 2007). Indeed, Burke and colleagues (2002) stress that the relationship between parenting behaviour and child behaviour is both dynamic and bi-directional. Chronic aggressive, oppositional, and non-compliant child behaviour provides an ongoing source of stress and frustration for affected parents. Importantly, parental RF may moderate the impact of children's characteristics and behaviours on parental behaviour. Parents with a lower capacity for RF are more likely to be influenced or affected by their children's behaviour (Benbassat & Priel, 2012; Burke et al., 2002; Greenwald, 2002). It is of clinical concern that mothers in the current study suggested that, in response to the emotional and psychological strains of mothering children with severe behavioural issues, they had employed a range of coping mechanisms and psychological defences that may inhibit the ability to mentalise (Landy, 2011).

Taken together, this constellation of factors could play a role in eliciting patterns of parent-child interactions that lead to increases in aversive behaviour and parenting-related distress and difficulties. In turn, these factors may reduce children's and caregivers capacity for positive engagement together, elevating the risk for negative parent-child interactions. Such an environment may underpin harsh parenting practices, parental rejection of the child, and an increased risk for child maltreatment (Burke et al., 2002; Greenwald, 2002; Podolski & Nigg, 2001; Priddis et al., 2014).

Indeed, Benbassat and Priel (2012) suggest that parental mentalising may contribute to the divergence in qualities between authoritative and authoritarian parents. Parents with a higher capacity for RF are better equipped, and more likely to reason with their children and consider their children's point of view, two central characteristics of authoritative parenting. On the other hand, parents with a lower capacity for RF are less likely to possess the capacity to have a deep awareness of, and display sensitivity toward, their children's feelings and unique perspectives (Benbassat & Priel, 2012). Further, these parents are more likely to hold a predisposition toward negative and distorted attributions, both of their children and their children's behaviour (Benbassat & Priel, 2012). These factors are central characteristics of authoritarian parenting, which usually manifests in demands pertaining to obedience, and punishment of bad behaviour (Benbassat & Priel, 2012).

Current understanding as to what underpins the exhibition of non-optimal parenting styles is relatively limited (Schechter et al., 2005). In particular, parents are unlikely to consciously choose to adopt a hostile approach. External factors prominent in the literature, such as young motherhood, low SES, low level of maternal education, and maternal exposure to domestic violence do not elucidate internal mechanisms, influences, or motivations (Schechter et al., 2005).

By reframing non-optimal parenting practices as external representations of internal difficulties related to a mothers' ability to regulate, organise, and coherently reflect on both her own and her child's mental states both accurately and concurrently, we can start to expand our understanding of how a parent-child relationship comes to be characterised as insecure and susceptible to an emotion dismissing style of parenting. In turn, these underlying maternal difficulties may contribute to intergenerational patterns of socio-emotional difficulty (Aber et al., 1999; Grienemberger et al., 2005; Slade et al., 1999; Slade et al., 2005). Recently, in a sample of families with a toddler exhibiting disruptive behaviour problems, Mence and colleagues (2014) reported that parents tended to demonstrate a bias toward misclassifying their children's non-angry expressions and behaviours as angry. In turn, hostile parenting and discipline was associated with anger-biased appraisals of child behaviour (Mence et al., 2014). Interestingly, in the present study, approximately half of the mothers had difficulty acknowledging that their children felt any emotions other than anger.

Finally, in the related area of the bi-directional associations between child characteristics, child emotional expressive styles, and parental emotion coaching, previous research has suggested two salient child-to-parent factors. First, child behavioural factors may influence their parents' inclination to undertake emotion coaching behaviours. Second, child behavioural factors may moderate the efficacy of any parental emotion coaching that is undertaken (Dunsmore et al., 2013).

Consonant with the trends observed in the empirical findings of the present study, Dunsmore and colleagues (2013) reported that, on average, parents of children diagnosed with ODD engaged in levels of emotion coaching that were comparable to parents of non-ODD children, and held beliefs about their children's emotions that were similarly comparable to control populations. However, relative to control parents, parents of ODD children tended to be more encouraging of their children's dealings with negative emotions. The authors concluded that the social transactions between parents and diagnosed children set up a self-perpetuating dynamic, whereby frequent

child exhibition of negative affect elicits parental attempts to coach their child with respect to negative emotions, which, in turn, encouraged the child to focus on negative affect (Dunsmore et al., 2013).

8.5 Research Limitations

Primarily a qualitative investigation, the small sample size in the current study rendered the quantitative data unsuitable for statistical reliability and modelling. Reported statistical trends should also be treated with caution. In particular, the results of the correlational analyses need be interpreted with caution in light of the small sample size, which resulted in an underpowered study that may have permitted chance associations, or failed to detect existing associations (Cohen, 1992). However, in light of the moderate-to-strong effect sizes (Jackson, 2006) and the meta-analytic perspective, which states that effects should not be suppressed on the grounds that they may be unreliable (Clark-Carter, 2009), these results were reported in the current Study.

In line with other qualitative investigations, the findings of the current study may not generalise beyond the current group. However, the sample of experiences of mothers of children with behaviour disorders included in the current study are likely to be useful to professionals working with similarly affected families and may provide some sense of shared experience to other mothers, reducing reported feelings of isolation or uniqueness of experience (de Lange & Olivier, 2004).

Finally, sharing an underlying premise with RF, IPA accepts the cognitive, linguistic, emotional, and physical facets of human subjects, and relies on the chain of connection between their cognitions and affects, and their spoken representations of these (Smith & Osborn, 2003). Inherent to this process are complications related to difficulties expressing thoughts and feelings, censored self-disclosure, and researcher-driven interpretations of participant mental and emotional states based on language that may be devoid of explicit mental state language (Smith & Osborn, 2003).

8.6 Summary

Approaches to working with mothers of children with clinically significant behavioural problems should seek to engage and understand all members of the affected family, and provide support in a manner that does not add to the mothers' feelings of stress

and isolation. Strategies should acknowledge attachment difficulties, the potential impact of trauma on child behaviour, and emotion dysregulation (Ford et al., 2000). Mothers in particular require assistance with emotional containment, and an opportunity to resolve childhood issues pertaining to their own experiences of being parented, before new strategies for emotion socialisation and sensitive parenting can be undertaken effectively with their own children.

Harnessing and accentuating positive experiences and any novel capabilities discovered within mothers of affected children provides one potential avenue for individualised approaches to assistance and support that has received little attention in the literature. Strengthening and building on positive attributes may be beneficial as a strategy in addition to interventions that narrowly target non-optimal parenting behaviours.

CHAPTER 9

GENERAL DISCUSSION AND CONCLUSION

Children who exhibit high levels of aggressive and disruptive behaviour are the most likely to be referred to mental health services (Combs-Ronto et al., 2009). The persistence of externalising behaviour at above age-normative levels throughout development reliably predicts that the affected child will encounter significant adjustment, social, and behavioural difficulties while navigating adolescence (Campbell et al., 2006). If not modified in childhood, these difficulties are likely to continue into adulthood, taking the form of anti-social or violent behaviour, criminality, and psychopathology (Campbell et al., 2006). Indeed, retrospective investigations reveal that the vast majority of youth and adult perpetrators of serious illegal, delinquent, and violent offences have a history of chronic aggressive and antisocial behaviour that has its roots in early childhood (Frick, 2006).

In addition to the detrimental impact on children and their families, as a society we pay a high price if we do not attempt to improve the quality of the early environments encountered by high-risk children (Bayer et al., 2008; Frick, 2006; Tremblay, 2006). These children are likely to require increasingly costly access to clinical services, remedial education services and resources. Further, they are more likely to endanger the safety of students and teachers within the school system, and disrupt the educational experience of other students (Bayer et al., 2008; Frick, 2006). In time, high-risk children are more likely to encounter higher incidences of unemployment, sick-leave, and interactions with the criminal justice system (Bayer et al., 2008; Frick, 2006).

The roles of, and relationships between, child trauma history, maternal factors, and child emotion regulation in the aetiology and maintenance of behaviour disorders identified in the present research may serve to improve initiatives pertaining to early detection, as well as offer recommendations for multi-modal and individualised principles of treatment that can be delivered by a multi-disciplinary team. The key findings from the present research are outlined below.

9.1 Key Findings

In order to expand on the body of literature pertaining to the aetiology and maintenance of externalising behaviour disorders, the overall aim of the current research was to add

weight to the growing body of empirical literature pointing to the need to consider child externalising behaviour as a possible consequence of dysregulation due to exposure to: (1) early trauma and loss, (2) a non-optimal familial environment that is characterised by a primary caregiver who struggles with reflective functioning or adopts an emotion dismissing style with respect to emotion socialisation, or (3) both early trauma and a non-optimal familial environment. The results of the two studies undertaken addressed the four key aims of the research, as outlined below.

9.1.1 Prevalence of trauma exposure and mental health concerns in Western Australian children and their families.

In the large community sample of Western Australian school children, approximately 10% had received a mental health-related clinical diagnosis. ADHD was the most prevalent, followed by anxiety, PTSD, ODD, and depression. The pattern of diagnoses amongst the clinical sample was similar, with ADHD being the most prevalent diagnosis, followed by anxiety, ODD, and depression. These patterns were largely consistent with previous surveys (e.g., Patterson et al., 2012; Sawyer et al., 2001).

Similar to the pattern of diagnostic findings, empirically-based symptom clusters pointed to the prevalence of attention problems, with 53.3% of referred children falling within the clinical range. However, only 1.9% of the community sample fell within the clinical range. Rates of anxiety/depressed and withdrawn/depressed were more prominent than their diagnostic counterparts, with 40% of referred children falling within the clinical range for each. Similarly, amongst the community sample, 2.9% and 1.6% of children, respectively, fell with the clinical range. Highlighting the importance of investigating a purer 'aggression' construct (Connor et al., 2004; Levac et al., 2008), 73.3% of referred children and 2.5% of the community sample fell within the clinical range for aggression. The community prevalence conformed to the rate predicted by Tremblay's (2006) high/chronic use group. First and Tasman (2004) claimed that a focus on early aggression was clinically important, as aggression appeared to demarcate children whose behavioural problems abated with age from those whose difficulties continued into later life.

Overall, the low prevalence of PTSD was notable in light of the relatively common nature of exposure to trauma, particularly in the referred sample. In the community sample, over 90% of children had encountered at least 1 potential environmental stressor. The majority had encountered three or more types, across four or more

discrete incidences. Amongst the sample of referred children, traumatic experiences were ubiquitous. Children encountered between 2 and 9 trauma types, with 80% encountering 4 or more types. The number of repeat encounters ranged from 2 to 27, with 86.6% of children reported as encountering 5 or more acute or chronic traumatic events. These findings supported previous studies that noted the high prevalence of trauma exposure in community and high-risk child populations (e.g., Connor et al., 2004; Ford et al., 2000; Greenwald, 2002), and contributed to the literature by assessing the prevalence of exposure with a developmentally appropriate measure, and conducting the research with a sample of community and referred Western Australian children.

9.1.2 The inclusion of child trauma exposure and maternal factors in clinical and diagnostic conceptualisations of child behaviour problems.

Greenwald (2002) argued that exposure to significant trauma or loss may be critical to the precipitation and propagation of child behaviour disorders. Alarmingly, approximately 27% of the community sample met the cut-off for clinical significance with respect to PTS symptoms. PTS symptoms were more prevalent in the referred sample, with approximately 87% of children falling within the clinical range. Together, these results highlight the prevalence of PTS symptoms in children, and add to the foundation for an argument to include reactions to trauma in clinical and diagnostic conceptualisations of child behaviour problems.

Adding to this foundation, among community children who did not meet the criteria for clinical levels of PTS symptoms, none fell within the clinical range for adverse outcomes. Indeed, Greenwald (2002) proposed that one explanation for the poor level of efficacy observed in current intervention programs is that the effects of trauma, and their sequelae, are rarely considered in clinical formulations or intervention programs.

Further, strong, positive associations between child PTS symptoms and anxious/depressed symptoms, withdrawn/depressed symptoms, attention problems, and aggression, respectively, were observed across the studies. These associations are considered in Section 9.1.3.

With respect to the inclusion of maternal factors, amongst community mothers, the relationship between self-reported RF and child adaptive emotion regulation was significant and positive. The relationship between self-reported maternal emotion

coaching parenting and child adaptive emotion regulation was significant and positive. The relationship between self-reported maternal emotion dismissing parenting and child adaptive emotion regulation was significant and negative. Moderation analyses indicated that maternal emotion coaching moderated the relationship between child trauma exposure and child adaptive emotion regulation. Findings pertaining to maternal RF and emotion coaching are further detailed in Section 9.1.4.

9.1.3 Relationships between child trauma history, maternal factors, child emotion regulation, and child outcomes.

Noting the reductions in treatment efficacy with age, early identification of children at risk of conforming to the problematic trajectory is critical (Shaw, Owens, Giovannelli, & Winslow, 2001). Early identification also ensures that resources can be directed to the most appropriate individuals, families, and social or professional support services in a timely fashion (Broidy et al., 2003; Sawyer et al., 2001). As such, early identification and targeting of high-risk pre-school children and their families may represent the most effective strategy for interventions that circumvent adolescent aggression (Tremblay, 2006).

Accordingly, research studies need to uncover a set of specific, reliable risk factors that clinicians, health professionals, school staff, parents, and community members can ascertain (Shaw et al., 2005). In addition, Sawyer and colleagues (2001) noted that the mechanisms giving rise to the relationship between risk factors and child and adolescent mental health problems require better understanding. Further, efficacious interventions require a fuller understanding of the aetiological mechanisms underlying externalising behaviours (Bayer et al., 2008).

One of the most significant findings reported was the cumulative-risk model depicted in Figure 7.3. This model indicated that, as a behavioural outcome, childhood aggression appears to be associated with a number of factors and mechanisms that may work in concert to either promote or reduce its likelihood. The hypothetical causal model in Figure 7.3 significantly accounted for the correlational data collected in Study 1, and contributed to the aggression literature by statistically confirming and extending a number of less comprehensive models proposing potential precipitating and underlying factors (e.g., Bailey et al., 2006; Gottman et al., 1996; Katz & Windecker-Nelson, 2006; Lunkenheimer et al., 2007; Maughan & Cicchetti, 2002; Ramsden & Hubbard, 2002; Shipman et al., 2007; Trentacosta et al., 2008). Importantly, the constructs included in

the model can be assessed via widely available, simple, and inexpensive protocols.

Although existing research has identified a key role of mother's capacity for reflective functioning in children's socio-emotional growth (Slade et al., 2005), to date, no known studies have investigated the important conceptual link between a mother's capacity for reflective functioning and later child behavioural outcomes, especially in the face of early trauma exposure. Attachment-related parenting factors are hypothesised to impact on distal child outcomes, including aggression, by modifying aspects of children's socio-emotional functioning (Ramsden & Hubbard, 2002).

In the current research, maternal RF appeared to be positively associated with child adaptive emotion regulation, and negatively associated with child attention problems. Maternal emotion coaching appeared to interact with child trauma exposure, influencing the impact of trauma exposure on adaptive emotion regulation. In turn, child adaptive emotion regulation was negatively associated with social withdrawal and depression. Accordingly, children in the referred sample reportedly exhibited lower levels of adaptive emotion regulation and higher levels of emotion lability/negativity than their peers in the community sample.

Child PTS symptoms were positively associated with each of the four adverse outcome variables. These pathways remained significant over and above significant contributions from maternal RF, child adaptive emotion regulation, and emotion lability/negativity.

Finally, positive associations emerged between aggression and the three additional outcome variables, namely anxiety problems, withdrawn/depressed problems, and attention problems. Together with the high level of comorbidity between aggression and adverse outcomes observed in the referred sample, the current research contributed to the aggression literature (e.g., Dunsmore et al., 2013) by empirically confirming that attention problems, withdrawn/depressed behaviours, and anxious/depressed behaviours were also highly correlated in the community sample.

9.1.4 The relationship between maternal RF and maternal emotional styles.

Researchers have only recently begun to suggest a prominent role of attachment-related parenting behaviours and capabilities in the pathway from child trauma

exposure to adverse behavioural and mental health outcomes (e.g., Katz & Windecker-Nelson, 2006; Lunkenheimer et al., 2007; Shipman et al., 2007). The current research added to the literature depicting these relationships.

In the community sample, no systematic differences in mother's self-reported RF capacity, or levels of emotion coaching and emotion dismissing parenting emerged as a function of child gender, or SES category. A significant, positive relationship between self-reported maternal RF and emotion coaching parenting was found. A significant, negative relationship between self-reported maternal RF and emotion dismissing parenting was found. The qualitative accounts contributed by mothers of clinically aggressive children illustrated the relationship between RF capacity and emotion coaching or dismissing behaviour.

Well, I don't like it, cos she's just screaming and yelling at me, and everything else, and what-not. But, um, it just depends. You know, sometimes I'll be calm about it, other times I'll be yelling back. You know, "What do you want me to do about it?" or, you know, "Get over it, or just do something else." You know, um... But yeah, I don't like it. I wish she wasn't like that, and I wish I didn't have to deal with it, basically. (ID07, RF = 0)

He was starting to throw things, and I intervened and I was able just to sit with him, while he was throwing sticks and grass on me. And without reacting to that, was able to talk through what was going on with him and calm him down and find something else for him to do ... It is hard when he is throwing stuff at you and swearing at you, but I was sort of, to use the word, tolerant about that. (ID03, RF = 5)

Even the negative situations now make me feel good. Like, even, you know, if the kids have a complete meltdown, or it looks like a meltdown to other people, I can understand what they have done, and why they've done it. And, like, err... if I kept myself under control as well, and, you know, talked calmly to 'em, and settled things down, and stuff, that makes me feel really good. (ID04, RF = 6)

[About characters on TV show] I think at one point there I said- because Hamish is always getting Andy to do stupid things- I said "How do you think that made Andy feel?" You know, "What was he thinking?", "What was Hamish

thinking when he made Andy do that?”, “Was he being a good friend?” So we try and always have these little conversations, because I try and always bring it back to him and his brother. (ID08, RF = 5)

Mentalisation theorists have argued that maternal RF positively influences parenting behavior, is beneficial for child development, and constitutes a protective factor against adverse child outcomes, particularly in the face of trauma exposure (e.g., Allen et al., 2008; Fonagy & Target, 2003; Slade et al., 2005). The present research undertook the first known study to utilise a questionnaire-based measure of maternal RF to investigate this construct in the context of child aggression (Study 1). It also undertook the first known study to examine the role of maternal RF in a sample of mothers of children with clinically significant behavioural difficulties (Study 2). Overall, the research thus makes important contributions to the Mentalisation literature by providing empirical and qualitative evidence supporting the potential role of this construct in child aggression and underlying emotion regulatory abilities. Further, as RF is a capacity that can be modified, all mother-child dyads in the sample may benefit from growth in this area.

9.2 Implications of the Research

The current research adds weight to, and extends upon, several recommendations for expanding our conceptualisation of child behavioural disorders. Implications for assessment and approaches to intervention are discussed below.

9.2.1 Implications for assessment.

And then, umm, [Agency] took over, and they took over for a few weeks, stopped the other counsellor, which was abruptly stopped. Umm, and then told B that she was just a naughty, attention seeking, little girl. They stopped her counselling there, so she had absolutely nothing. And that's when she first started attempting suicide. (ID06, RF = 5)

A more comprehensive clinical assessment of child and parental history is encouraged. In-depth assessments permit clinicians to plan appropriate intervention strategies, and track children's symptoms, functioning, and outcomes during the intervention and post-intervention phases (Igelman et al., 2007). Four primary recommendations flowing from the results of the present research emerged.

First, the current research aligned itself with calls for physically aggressive child behaviour to be demarcated from non-aggressive forms of misconduct (e.g., Achenbach et al., 2003; Levac et al., 2008; Loeber et al., 2000). Children who exhibit severe and persistent aggression may require specialised intervention that is fundamentally distinct from general approaches to treating oppositional behaviour and misconduct.

Second, the cumulative-risk model depicted in Figure 7.3 suggests that undertaking an explicit assessment of adaptive emotion regulation and emotion lability/negativity may be appropriate. Indeed, common to the symptomatic expression of all the disruptive behavioural disorders are underlying regularity deficits (Ford et al., 2000). Importantly, Bandon and colleagues' (2010) longitudinal study did not find any reciprocal influences between child emotion regulation and externalising behaviour problems, suggesting that emotion regulation deficits were driving the association between the two constructs.

Third, a developmental history that documents early exposure to trauma, environmental stressors, and loss, including any clinically significant pre-natal complications or maternal factors, should be undertaken. Igeman and colleagues (2007) state that such assessments are currently under-utilised in clinical practice. Early exposure to trauma may lead to an immediate stress response that may manifest as attention problems, anxiety, withdrawal, or aggression, via a range of pathways and mechanisms, such as those proposed in Figure 7.3. Evidenced-based childhood trauma assessment tools are available and recommended to identify children suitable for trauma-informed intervention (see Igelman et al., 2007).

Indeed, the myriad mutual risk factors and underlying impairments, particularly those pertaining to information processing, affect regulation, behavioural regulation, and attention, as well as the overlap in observable symptoms and significant comorbidity between diagnoses of disruptive behavioural disorders and PTSD, point to the need to identify whether a child's presentation is better accounted for with respect to PTS symptoms (Bailey et al., 2006; Ford et al., 2000). Although symptoms of trauma typically manifest within 3 months of initial exposure, it is worth noting that symptoms may not manifest for up to 10 years, particularly in response to interpersonal traumas such as physical or sexual abuse (APA, 2000; Ford et al., 2000). Further, most PTS symptoms tend to abate within a year of onset, though associated emotional and

behavioural symptoms often persist (Ford et al., 2000). These findings can be interpreted as further indications of the need to conduct a thorough child history, as current symptom expression may relate to distal events, rather than contemporaneous experiences. In addition to improved client-focussed outcomes, research has also indicated that trauma-informed treatment planning may assist practitioners. By providing a framework for understanding and working with challenging clients, trauma-informed planning may lead to decreases in practitioner subjective distress, increases in empathy, and increases confidence in the helping role (Greenwald et al., 2008).

Finally, in light of the results discussed in Section 9.1.2, 9.1.3, and 9.1.4, the early mother-child relationship, familial emotional environment, and maternal mental health difficulties should be considered during assessment. Particularly, attention should be awarded to maternal RF capacity and emotion coaching practices.

9.2.2 Implications for intervention.

The current research highlighted the potentially complex nature of aggressive child behaviour, the high prevalence of comorbid internalising problems, a range of potential disruptions to adaptive emotion regulation and affect lability/negativity, and the need to consider the familial context within which problem behaviours have developed and will be treated or modified. It is therefore recommended that, as much as is possible, treatment plans be devised by a multi-modal and multi-disciplinary team with the flexibility to tailor intervention services to the individual child and family (Priddis et al., 2014).

*Umm, she knows she has been rejected by [Hospital] by the Psych Department. She knows that ... Like, she says "What's the point of going there? They only go-" she goes, she'll say, like, she'll swear about it, she goes "They only f*** me off!" ... She'll say, she'll say, even, it doesn't matter how sick she is, she says "What's the point of even going?" ... She says "I just tell 'em what they wanna hear" ... And she admits, she admits that to me! (ID06, RF = 5)*

In the recent literature (e.g., Pappadopoulos et al., 2011) there have been calls for research that adds to the weight of evidence pointing to the need to develop guidelines for best practice with respect to treating childhood aggression that can be administered in primary care and outpatient settings. A consensus amongst researchers and experts indicates that evidence-based psychosocial and psychological interventions,

and parent education and training are recommended over the use of medication (Pappadopulos et al., 2011). However, current practice trends show a decline in these recommended approaches to treatment and a significant rise in the off-label use of atypical antipsychotic medications for behaviour management (Pappadopulos et al., 2011).

Scott and Dadds' (2009) influential review article asserts that, over the past 40 years, clinical interventions targeting disordered behaviour have predominantly had their basis in the tenets of social learning theory. Social learning theory posits that external contingencies have a direct and important affect on one's behaviour (Scott & Dadds, 2009). In families affected by disordered child behaviour, parental modelling of antisocial and aggressive behaviour, and parental reinforcement of negative child behaviour are considered problematic (Scott & Dadds, 2009). Increasing parental warmth, encouraging reinforcement of positive child behavior, and setting limits constitute the prominent interventions (Scott & Dadds, 2009). Encouragingly, manualised interventions couched in this theory have proven to be efficacious and have large effect sizes (Lundahl, Risser, & Lovejoy, 2006).

However, social learning theory has been criticised for taking the perspective that children are simply corrupted by environmental influences (Tremblay, 2010). Further, it does not fully acknowledge or harness the mechanisms promoting optimal parent-child relationships, nor the inner world of the child or the parent who is required to change (Scott & Dadds, 2009). Contemporary approaches champion a broader, familial approach, which may incorporate elements of attachment theory, structural-systems theory, cognitive attribution theory, and motivational interviewing (Scott & Dadds, 2009). Uncovering which treatment approach works best for whom has become a critical focus in intervention research (Steele et al., 2014).

Expanding current trends in the clinical landscape, recommendations flowing from the current research point to the need to assist children with the regulation of their behaviour, while teaching and modelling developmentally appropriate alternative behaviours to aggression, as this learning may not have occurred in early childhood (Tremblay, 2006). Importantly, strategies targeting regulation should be devised (see Landy & Menna, 2006) and administered in light of recommendations pertaining to assessment of child trauma history.

The current research recommends that children affected by trauma receive interventions targeting trauma symptom amelioration across a range of modalities, including mind, brain, and body (see Perry, 2009). Indeed, recent studies have indicated that, in samples of youths attending residential treatment facilities (Greenwald et al., 2012) and community outreach programs (Becker, Greenwald, & Mitchell, 2011), trauma-informed treatment methods contributed to improvements in presenting problems, reductions in time to discharge, and increased rates of discharge to lower level of care.

Importantly, rather than the administration of interventions that target narrow problem areas, the present research also indicates that best practice behaviour management strategies should consider child behaviour within the context of the broader familial environment. Indeed, child behaviour occurs within an eco-system of interconnected and interdependent relationships between environmental, interpersonal, and intra-personal factors that highlight the need to address problematic environments (de Jong, 2005). This approach requires moving away from efforts to modify child or parental behaviour in isolation, and toward modifying the child's environment, including the salient adults in the child's life (Bradley et al., 2008; de Jong, 2005), and deficits in core parent-child interactions (Tarabulsky et al., 2008).

His experience at [School], yeah. I don't think that was- I don't think- It's not that it was handled wrongly, I just don't think it was handled correctly for M. For the way he was behaving ... I think they thought they were going to change him. That's what they were trying to do. They were trying to change his behaviour and make him change. It just wasn't going to happen.

(ID01, RF = 4)

In Australia, none of the five predominant approaches to behaviour management that are endorsed as good practice reflect the recommendations of the current research (de Jong, 2005). Rather, problematic behaviour tends to be superficially treated as a problem with discipline, that is best addressed via a focus on behaviour control, applied behaviour analysis, thought modification, consideration of consequences of behaviours, or correcting faulty beliefs (de Jong, 2005). Importantly, Tremblay (2006) states that young children should not be prohibited from the use of physical aggression, which, during early development, is appropriate and may facilitate normal emotional development.

Finally, the present research aligns with recent proposals for the adoption of trans-diagnostic treatment approaches, as opposed to disorder-specific, or orientation-specific treatment approaches (e.g., Becker et al., 2011). The rationale for this proposal points to the shared symptoms across behavioural disorder diagnostic categories and high levels of complexity and comorbidity (Becker et al., 2011). Becker and colleagues (2011) concluded that “A trans-diagnostic treatment approach that addresses the common underlying processes, and that can be applied with some flexibility without violating treatment fidelity, would have a greater chance of being learned well and applied in clinical practice” (p. 268).

9.2.2.1 Assisting families.

De Lange and Olivier (2004) asserted that family therapy that includes all affected family members is a necessary component of any efficacious child intervention strategy.

It was very hard. Most people only ever worked with me, giving me parenting skills and techniques to deal with his outbursts. Umm, it still didn't stop me from getting hit, and, umm, yeah, I just found that I really wasn't getting the help that I, well, that he needed. (ID03, RF = 5)

Aligning with the findings of the current research, and encouraging the active, ongoing involvement of all family members (Jackson, 2003), Micucci (1995) outlined four strategies for efficacious family therapy that lend themselves to administration within a multidisciplinary framework. First, therapy should support parents. Indeed, it has been widely acknowledged that parents require support and assistance to effectively manage the challenge and responsibility of raising a child who exhibits clinical levels of aggressive behaviour (Levac et al., 2008).

I think I feel guilty every day, most days. Today especially, when we're just talking about this stuff, I do, I feel, like I said, I always feel like I fail L ... I don't know what the right thing to do- I'm so very indecisive. I hate making decisions, big decisions ... I have no faith in my own decision-making skills. (ID14, RF = 5)

Intervention programs should not constitute an additional stressor for parents. However, mothers in the current research reported that dealing with parties external to

themselves presented an additional and ultimately unhelpful burden. Similarly, amongst a sample of mothers with children with ADHD symptoms and associated behaviour problems, Podolski and Nigg (2001) reported that increased use of community resources and social supports were related to higher levels of maternal distress. Podolski and Nigg (2001) provided two possible explanations for their finding. First, it is possible that parents only begin to seek community resources, or encounter teacher and other professional involvement, once the severity of their children's behaviour has reached a level that is beginning to cause mothers significant distress. The commencement of these services were then associated with the mothers' concurrent experience of heightening distress (Podolski & Nigg, 2001). Second, it is possible that for this group of mothers, the existing community-oriented services were ineffective or detrimental. For this sample, several community services had also withdrawn support due to the severe nature of the children's difficulties, furthering the parent's social isolation (Podolski & Nigg, 2001).

The current research adds that if parents are not cognitively, emotionally, and psychologically prepared and equipped to engage with services, encounters may be experienced as overwhelming and counter-productive. As such, parental drop-out and parental lack of motivation to implement strategies are often at least partly attributable to issues with intervention design and delivery (Kazdin, 2005; Reyno & McGrath, 2006).

Second, Micucci (1995) states that parents and children should be assisted to repair dislocated relationships, and learn a set of skills to equip them with the ability to repair future relational disruptions. Indeed, although the majority of family- or parent-based programs address problematic behaviours and characteristics, it is rare for core relational issues to be targeted (Tarabulsky et al., 2008).

Third, families should be assisted to contain conflicts (Micucci, 1995). In the current research, mother's strategies often centred around preventing escalation of the children's affect, and ensuring their children were not at risk of harming themselves or others. A minority of mothers reported engaging in relationship reparative behaviours after such incidences, with the majority preferring not to acknowledge the incident for fear of re-initiating unresolved, or seemingly unresolvable, problems.

Research suggests that aggressive children may be particularly vulnerable to deficits in exposure to appropriate coaching and modelling around aggression (Fung, 2007).

Aggressive children often exhibit a limited range of strategies for conflict resolution, poor anticipation of consequences, and expectations of positive outcomes for the use of aggression. These may include reinforcement via positive attention, and unrealistically positive views of the self (Fung, 2007).

Assisting mothers to manage their own anger may, in turn, assist their aggressive children. Indeed, simple maternal processes such as positive reframing have been associated with both lower levels of child misbehaviour and parental distress (Podolski & Nigg, 2001).

Fourth, Micucci (1995) states that families should be assisted to discover competencies and supported in the development of these positive aspects. Indeed, interventions designed to strengthen or encourage protective factors are equally as valuable as those designed to reduce or attenuate the occurrence or impact of risk factors (Burke et al., 2002). The current research indicates that clinical interventions designed to assist affected children via strategies that target caregivers and modulate the nature of the mother-child relationship, specifically via strengthening maternal RF and emotion coaching behaviour, potentially present an opportunity for the enhancement of protective factors.

Rosenblum and colleagues' (2008) study recommended that mothers' capacity for RF be targeted in addition to child-focussed interventions. Interventions targeting the development of parental RF (e.g., Grienemberger et al., 2004; Slade, Sadler, & Mayes, 2005; Slade, Sadler, de Dios-Kenn et al., 2005) explicitly permit parents to start to modify their parenting behaviours as they begin to develop a broader understanding of the intentions, motivations, and additional mental states underlying both their own, and their child's intentions and perceptions (Slade, Grienemberger et al., 2005).

[I: If you are sad upset as opposed to angry upset his response sounds very different?] Yeah, it is. I never realised that until now. Isn't that funny? If you ask the right questions you get answers! (ID09, RF = 6)

Importantly, interventions that attempt to modify parental behaviour via a direct focus on parenting skills, and do not focus on socio-emotional learning or parental emotional responsiveness have been relatively ineffective (Slade, Grienemberger et al., 2005; Wilson, Havighurst, & Harley, 2012). Mentalisation-based interventions approach parental behaviour modification indirectly. By encouraging mothers to reflect on their

behaviours more deeply, modifications to the way mothers think and feel about their own behaviour and experiences often begin to occur (Slade, Grienemberger et al., 2005). Changes to existing mental representations of their child also tend to occur, with mothers beginning to see their child as a psychological agent with an internal world that is separate to that of the mother (Rosenblum et al., 2008; Slade, Grienemberger et al., 2005). In turn, these changes at the cognitive and psychological level tend to be more successful in leading to sustained changes in parental behaviour, casting maternal RF as a salient agent of change (Slade, Grienemberger et al., 2005). Indeed, Grienemberger and colleagues (2005) found that maternal RF and maternal behaviour were closely related. Positive changes to maternal RF and the parent-child relationship may also establish an environment that better facilitates the development of child mentalisation (Rosenblum et al., 2008).

Mirroring recommendations that interventions should model for parents the environment and behaviours that are considered optimal in the parent-child relationship, mentalisation-focused interventions should strive to assist mothers to improve their emotional mastery skills, as well as the exhibition of these skills. For parental RF to be most effective, parents must go beyond simply understanding their child's anger, fear, or distress (Fonagy & Target, 1998). Understanding must be combined with affect, rather than just communicated at a cognitive level. Further, parents need communicate their understanding and provide a model of emotional mastery that their child can observe and begin to internalise (Fonagy & Target, 1998).

A number of techniques for improving maternal emotion socialisation and reflective functioning have been proposed, including video-playback (see Grienemberger et al., 2004; Slade, Sadler, & Mayes, 2005; Slade, Sadler, de Dios-Kenn et al., 2005). During video-playback of interactions with their children, parents can be encouraged to consider what their children are thinking and feeling at specific instances, and how they themselves felt during the interaction and in the present moment. This process may begin to positively influence the parent's self-reflectivity, change negative attributions about themselves and their children, and, in turn, improve their sensitivity toward their children (Priddis et al., 2014; Schechter et al., 2006).

Empirical data pertaining to attachment-based interventions that incorporate video feedback are growing, and they appear to validate their efficacy in parent-child programs (Steele et al., 2014). To investigate the affects of the *Circle of Security – Home Visiting* intervention (Cooper, Hoffman, & Powell, 2000) on mother-infant

attachment security, Cassidy, Woodhouse, Sherman, Stupica, and Lejuez (2011) employed a randomly controlled trial design, and administered the intervention to 85 mother-infant dyads from economically disadvantaged families. A control group of 87 dyads received psycho-education only. The intervention was disproportionately more efficacious for highly irritable infants, relevant moderately irritable infants. Amongst dyads whose relationships were rated as more secure, the intervention was only clinically beneficial for highly irritable infants. Amongst mothers rated as being more dismissing, relative to moderately irritable infants, highly irritable infants in the intervention group were more likely to be secure, and highly irritable infants in the control group were less likely to be secure (Cassidy et al., 2011).

The *Video-feedback Intervention to promote Positive Parenting* program (Juffer, Bakermans-Kranenburg, & van IJzendoorn, 2008) has produced positive results in families with children with externalising difficulties (Steele et al., 2014). Finally, Steele and colleagues (2014) review article states that a wealth of neuro-scientific data is beginning to add weight to the findings reported via clinical trials and outcomes-based research in this area.

Interventions that assist mothers to improve their emotion coaching skills are also supported by the present research. Previous studies have revealed two important findings pertinent to emotion coaching parenting in mothers of children with behavioural problems. First, the emotion coaching parenting style is less commonly employed amongst this group of mothers (Dunsmore et al., 2013). Second, when these mothers do increase their use of the emotion coaching parenting style, their child's behaviour and pattern of peer interactions are often observed to become more adaptive and appropriate (Dunsmore et al., 2013).

More generally, parental emotion-related communication, including emotion language and direct instruction related to coping strategies, an emphasis on the value of appropriate affective expression, and encouraging child active exploration of own and other affect, may assist all children with the regulation and understanding of emotion (Dunsmore et al., 2013). In addition, mental state discourse has been associated with secure attachment, the development of perspective-taking, child pro-social behaviour, and social competence (Asen & Fonagy, 2012).

The cost-effectiveness and efficaciousness of universal prevention programs teaching parents emotion coaching skills and awareness of their own emotions are gaining

empirical support (Wilson et al., 2012). Community parents participating in a program with a focus on socio-emotional learning, parental emotional responsiveness, and emotion coaching showed reductions in emotional dismissiveness, improvements in emotion coaching and positive involvement, in addition to improvements in child behavior and social competence (Wilson et al., 2012).

With regard to the social benefits associated with emotion coaching, as opposed to learning specific skills, children appear to acquire generalisable tools that equip them to learn during, and adapt to, emotionally challenging social situations (Gottman et al., 1996). Gottman and colleagues (1996) demonstrated that children with parents who were high in emotion coaching were socially competent with their peers at eight years of age, even though the social skills required for successful social navigation at this age were materially different from the skills modelled at five years of age.

Finally, interventions that promote an increase in parental emotion coaching are recommended based on the finding that, in addition to improved child social competence, adult social competence and the emotional climate of the family are also likely to improve (Hooven et al., 1995). Hooven and colleagues (1995) found that parents high in emotion coaching tended to report less inter-adult hostility and defensiveness in their marriage, as well as an emphasis on *we-ness*, a tendency toward expression of affect, and actively dealing with marital conflict (Hooven et al., 1995). These parents also reported less negativity and more positive during parent-child interactions, and considered dealing with conflict to be the most productive strategy for achieving harmony within the household (Hooven et al., 1995).

Growth in these areas may lead to increases in the amount of warmth and sensitivity with which mothers are able to convey during interactions with their children. Together, these strategies may reduce the likelihood of continuing child externalising behaviours (Schechter et al., 2005). Indeed, research has established that the early parent-child relationship can facilitate the development of child conscience, with parental responsiveness, sensitivity, and affective reciprocity forming the foundation for this process (Belsky, 1999). Once this foundation is in place, parent-directed discourse pertaining to internal states is recommended to engender in the child a sense of feeling understood (Rosenblum et al., 2008). Discourse pertaining to internal states also offers children opportunities to explore their own mental states and those of others, which promotes the development of empathy (Baron-Cohen, Golan, Chakrabarti, & Belmonte, 2008).

It is worth noting that some children who have been exposed to high levels of emotion coaching and possess elevated emotion regulation skills and better awareness of their own affect (Gottman et al., 1996) have been found to exhibit elevated levels of self-reported internalising symptoms and lower personal adjustment (Dunsmore et al., 2013). Similarly, children with higher levels of RF have been found to self-report higher levels of internalising problems, including depression and anxiety, and less positive self-perception, including lower self-esteem and increased self-criticism, than their less reflective peers (Benbassat & Priel, 2012).

Theorists have hypothesised that the contradictory findings between parent- or teacher-reports, and child self-reports of internalising symptoms, respectively, may be attributable to the theory that children with a greater level of insight into their own emotional states are better equipped to notice emotional difficulties, and may be more willing to report these affective experiences to researchers (Dunsmore et al., 2013). Dunsmore and colleagues (2013) concluded that any potential adverse short-term correlates of heightened child RF and emotion regulation are outweighed by the improvements to treatment efficacy that these factors contribute.

9.2.2.2 *Supporting mothers.*

Although acknowledging the importance of family therapy, de Lange and Olivier (2004) recommend that mothers be treated as special cases, and exposed to individual or group counselling in addition to concurrent family therapy, to assist them in working through their feelings, concerns, fears, and anxieties about their situation and child.

Supporting mothers is crucial (Neander & Engström, 2009; Priddis et al., 2014). In the current research, mothers of referred children spoke at length about the ongoing, and often isolating, role of being the primary caregiver to a child with severe behavioural problems. Mothers often attempted to balance their accounts with positives, rationalisations, and minimisations as to the extent of their children's impact on their physical and mental health. A majority of mothers of referred children denied having any emotional needs that were not currently being met, stating that they could manage on their own and that they had always been relatively independent. However, there emerged a sense that mothers were also facing a crisis. Thus, working in collaboration with mothers, assisting them with the parenting role, and providing strategies for

acknowledging, containing, and expressing their own emotions, may be helpful and also alleviate difficulties with stress and self-esteem (Priddis et al., 2014).

I sometimes feel like I need to take care of me, not necessarily somebody else ... There are times that I always want to ring my Mum, because Dad's busy working. I don't want to put everything on him because he's sad enough but... [I: Of course, your Mum passed away, how long ago now?] It will be two years at the end of the month. So, things, the feelings for that are sort of creeping back as well ... So, sometimes I just wish that [husband] maybe even would just remember that too. (ID01, RF = 4)

Paralleling mothers of children with Tourette's Syndrome (de Lange & Olivier, 2004), in the present research, mothers of children with clinically severe levels of behavioural difficulties were often faced with 'no-win' parenting decisions, uncertainty as to the best way to discipline and parent their children, especially in families where the affected child had siblings who received less lenient treatment, and uncertainty as to the best way to display negative affect in front of their children, especially aggression and anger. Further, mothers felt uncertainty in how to acknowledge and manage their own stress, anxiety, and sadness, in addition to distress about their children's future, particularly during adolescence.

In particular, mothers conveyed an almost ubiquitous absence of healthy coping strategies related to dealing with their own negative affect. This was particularly the case with respect to strategies for dealing with, and appropriately expressing, angry feelings. Often, deficits in strategies for managing affect appeared to have intergenerational roots, whereby mothers had rarely received overt or modelled instruction relating to healthy emotional expression, emotional coping, or conflict resolution.

I don't like being angry, I just don't know that I've ever really been taught how to be angry properly, and... I'm very scared of it. I get- the times when I've felt angry, I just feel like I'm going to faint. I feel adrenalin running through my body, and I just have to back off before it actually ... [About daughter] Just - it's quite intense, yeah, so I would say, very high frustration almost, with anger as well- She doesn't really know how to get the anger out. (ID15, RF = 3)

Indeed, the ability to control and express aggression is understood to be a developmental skill that needs to be mastered (de Lange & Olivier, 2004). Providing mothers with the tools and supportive environment required to commence the development of a set of adaptive strategies for the processing and expression of negative affect appears to be one facet of assistance that would be welcomed by this population.

Further, the potential flow-on effects from mothers-to-children make this form of assistance particularly attractive. Specifically, mothers who have not mastered affect regulation skills themselves are more likely to encounter difficulties coaching and modelling adaptive strategies for their children. This appeared to be the case in many examples in the current research where mothers were required to manage their children's negative affect.

I'm not the parent I wanted to be... Umm... We're not the family that I'd hoped for ... How did it [parenting child] change me? Well it's made me... Less loving and caring of my children, I suppose. Umm, I don't want to be part of the family so much. [Clears throat] Umm, if they can just do their thing, and I can just do mine, and we can just go through [nervous laugh] life like that, it would probably be easier ... I mean, you know, they will play by themselves and I will just do the housework and, you know, we rarely spend time together doing things, as a family unit, I suppose. (ID03, RF = 5)

Encouragingly, Barlow and Stewart-Brown's (2000) systematic review of 16 group parent education programs targeting parents of children aged 3 to 10 years with behaviour problems, but excluding ADHD, revealed that, overall, these programs led to positive changes in both in objective measures and parent perceptions of child behaviour. Evidence for the positive impacts of group-based parenting programs on maternal mental health, as well as reduced negative parenting and increased positive maternal parenting, and reduced negative paternal parenting is beginning to emerge (Levac et al., 2008).

Levac and colleagues (2008) asserted that, beyond simply providing parents techniques for child management such as limit setting and consistent discipline, intervention programs need to model optimal and high quality interactions that are indicative of the healthy parent-child relationships the clinical facilitators are hoping to

foster. This may be particularly appropriate for parents who were not exposed to optimal interactional patterns and environments in their family-of-origin.

With respect to their own childhood, mothers in the current research often reported strict, difficult, distant, or violent histories with one or both of their parents. Mothers' descriptions of their relationships with their own parents were overwhelmingly behavioural and practical in nature. They contained very few references to an emotional bond or connection offered, even following prompts from the interviewer. Although mothers appeared to have consciously attempted to modify approaches to parenting behaviour in reaction to positive and negative experiences as children, intergenerational similarities in emotional socialisation were apparent. Encouragingly, the mothers sincerely described wanting to do the best they could for their children, and a need for connection, but perhaps this could be best achieved by realigning the core of the relationship from being more practically-oriented to more emotionally-oriented.

One component of group programs that emerged as an important theme in the present research, and which has been widely reported in related studies (e.g., de Lange & Olivier, 2004; Levac et al., 2008), pertains to the nature of the therapeutic environment. Establishing a supportive, accepting, non-judgemental, and non-blaming space where parents feel safe is recommended. A supportive group environment is recommended for the role it plays in providing parents an opportunity to freely and honestly talk about their child's behaviour, share their own experiences of managing and coping with aggressive child behaviour, and give and receive emotional support (de Lange & Olivier, 2004). Each of these opportunities has been identified as valuable, and beneficial to parents and, in turn, their child (de Lange & Olivier, 2004).

Through discussions with other parents and the group facilitators, parents are presented with a range of different perspectives, and are encouraged to think, reflect on, and gain an improved awareness of, their thoughts, feelings, and behaviours, consider the possible implications of their behaviour from the perspective of their child, and acquire new skills, leading to more adaptive parenting skills (Levac et al., 2008). Sharing clear parallels with the RF literature, parental self-reflection is considered a critical mechanism in the change process, both in relation to the modification of parental factors and facilitating change in the parent-child relationship, and, in turn, change within the child (Levac et al., 2008). Self-reflection may assist parents initiate interactions with their child that both model and encourage pro-social behaviour, which

has been identified as an effective prevention strategy, with respect to the development of behavioural problems (Levac et al., 2008).

In addition, a number of mothers of referred children struggled to describe themselves as either a person or as a parent in a thoughtful or meaningful way. This finding is perhaps in part influenced by the all-consuming role of being a mother to a difficult child. These mothers tended to be outward-focussed, with the majority of mothers considering themselves 'busy' types who were very pro-active in offering their children practical assistance and support, and who were 'people pleasers'. This tended to represent a pattern of behaviour that appeared to pre-date the birth of their children, and often mirroring behaviour displayed by one of their own parents. Self-reflection with a family-of-origin focus may be of benefit to these mothers.

Finally, group-based parent education programs rarely explore the positive impacts of participation on maternal well-being, depression, and self-esteem (Barlow & Stewart-Brown, 2000; Neander & Engström, 2009). Ameliorating parents' psychological needs, and strengthening feelings of parenting self-efficacy, may contribute to the effectiveness of interventions that are aimed at decreasing adverse parenting practices and increasing supportive parenting practices (Bayer et al., 2012; de Haan, Soenens, Dekovic, & Prinzie, 2013; Kohlhoff & Barnett, 2013). As such, supporting mothers with sub-clinical and clinical levels of mental health difficulties and associated stressors may provide important benefits for the functioning of the mother-child dyad (Bayer et al., 2008, 2012; Neander & Engström, 2009).

9.3 Research Limitations and Recommendations for Future Research

Major research limitations were outlined in previous chapters. Briefly, the need to remove items related to sexual and physical abuse prevented exploration of these important factors. The current research attempted to produce a comprehensive model for the given sample size. A more complex model would require a strong theoretical basis, and a very large sample size to ensure adequate statistical power to analyse the network of relationships between included variables.

To further ensure the scientific integrity, statistical validity, and generalisability of findings to the target population, future studies may seek to employ a more rigorous approach to sample selection (Orav, 1995). The convenience sample employed in Study 1 required subjective judgment on the part of the researchers that the sample

population represented the target population (Hulley et al., 2007). Probability sampling may present a more robust approach to achieving a non-biased, representative sample, and is considered the gold-standard for achieving generalisability (Hulley et al., 2007; Orav, 1995).

Bearing in mind that samples of predominantly middle-class participants tend not to capture the extremes of childhood experiences and parental behaviours (Chang et al., 2011), a stratified random sample (Orav, 1995) of families that includes high-risk cases may present an appropriate study. While Study 2 did capture extreme child behaviour, these families were not included in the broader analyses of Study 1. Alternatively, employing a stratified random sampling procedure (Hulley et al., 2007) targeting pre-defined sub-groups, or strata, pertaining to levels of optimal parenting behaviour, rather than child behavioural outcomes, may be of interest to future studies.

Future studies may also seek to address limitations stemming from the cross-sectional nature of the data collected and analysed via SEM causal modelling in the present research. A longitudinal study testing the network of relationships presented in Figure 7.3 is the only procedure that will permit Kline's (2005) criteria of directionality to be met. Such a study would permit stronger inferences to be made about developmental ordering effects and pathways (see Combs-Ronto, Olson, Lunkenheimer, & Sameroff, 2009). Importantly, however, Kline (2005) cautions that only longitudinal studies that employ an *experimental* design can meet the requirement of causal closure and permit claims of causality. Given the nature of the variables under investigation, it is unlikely that this final criteria could be met in an ethical manner.

The questionnaire measures employed in the current research to quantify maternal RF and child emotion regulation have demonstrated acceptable psychometrics (see Section 7.1.2.1). However, similar to Study 2, which employed both a qualitative and quantitative measure of maternal RF, future studies may seek to use a range of measures to overcome limitations in the ability of any one measure to reliably capture these constructs. Child emotion regulation is considered a dynamic, multilevel, and dyadic process (Calkins, 2010). Lewis, Zinbarg, and Durbin (2010) state that the use of multiple measures, including self- or other-report, experiencing-sampling, and observation-based measures in parallel constitutes an exemplary approach to the study of regulatory behaviours.

Future approaches to conceptualising clinical diagnoses and treatments might stand to benefit from Fonagy and Target's (2002) proposal that the early attachment relationship evolved not only to establish templates for social relations, but also to influence the manner in which self-regulatory mechanisms are established and develop (Yanof, 2012). Indeed, child aggression is the external representation of a complex underlying network of factors that may incorporate aspects of cognition, biology, neurology, affect, personality, communication, and social information processing (Browne et al., 2012). The present research was only able to investigate a relatively small, but clinically important, sub-section of this range of factors. On the one hand, the array of factors provides myriad opportunities for clinical intervention. However, on the other, it presents a challenge to researchers hoping to build a complete and clinically useful picture of this pattern of behaviour.

Although maternal RF was measured, the associated and critical domain of child RF was not probed in the current study. The ability of children to understand their own mental states, coupled with the ability to understand the mental states of others, is proposed to facilitate the capacity to accurately interpret and predict the actions, intentions, and effects of others, and partake in collaborative, reciprocal, and intimate social relationships (Slade, 2005). With conceptual ties to theory of mind and social cognitive understanding, deficits in mentalising have been highlighted as potential risk factors for the dysregulated affect, behaviour, and impulse control that characterise externalising behaviours, and childhood aggression in particular (Allen et al., 2008; Lemerise & Arsenio, 2000).

Similarly, although the present research assessed stressors faced by the child, maternal stressors also play a significant role in child outcomes. Due to sample-size driven power-limitations, these were not comprehensively assessed or analysed.

I'm really happy that I had children, even though, when it's so painful when I am really grieving, I say to myself "I wish I didn't have children." Because, I feel that I've put so much hardship on them, you know, with all these experiences that I've had. But, I just understand that no one goes through a happy journey, and sadly it's happened this way, but it doesn't mean it's going to be sad for the rest of their life. (ID15, RF = 3)

In particular, the present research cast a spotlight on the relatively high prevalence of maternal mental health experiences. Prevalence rates in the current research tended

to be higher than previous estimates (e.g., Patterson et al., 2012; Williams et al., 2010), with a substantial percentage of the mothers sampled reported that they had experienced symptoms of depression (community: 41.7%, referred child: 73.3%), anxiety (community: 31.8%, referred child: 66.7%), unresolved loss or trauma (community: 7.6%, referred child: 13.3%), PTS symptoms (community: 6.4%, referred child: 20.0%), and bipolar disorder (community: 2.2%, referred child: 6.7%). The disparate outcomes are likely attributable to differences in methodology. Williams and colleagues (2010) employed a clinical diagnostic interview to determine the presence of mental health conditions, Patterson and colleagues (2012) recorded formal diagnoses, and the current study sought only maternal self-reports of mental health experiences, permitting the inclusion of experiences that may not have reached clinical significance.

The relatively high prevalence rates of maternal health symptoms reported in the current research are important to note, as maternal mental health represents a common phenomenon that may present a useful avenue for intervention and early identification of child risk (Barker & Maughan, 2009; Burke et al., 2002). Maternal psychopathology and exposure to stressors have consistently been associated with problematic child outcomes (Bayer et al., 2012; Burke et al., 2002). As such, future research should seek to explore the role of maternal mental health and stressors within the context of a cumulative risk framework.

Maternal depression has been linked to higher levels of intrusive parenting behaviour (Rosenblum et al., 2008), and cognitive distortions that affect representational models and capacity for sensitivity during mother-child interactions (Trapolini, Ungerer, & McMahon, 2008). Maternal anxiety has been linked to higher levels of intrusive and hostile parenting, and lower levels of reflective comments, sensitivity, and positive affect (Rosenblum et al., 2008).

Maternal anxiety and depression during pregnancy have also been associated with elevated risks of child cognitive difficulties, affective difficulties, difficult or irritable temperament, behavioural problems, and hyperactivity (Barker & Maughan, 2009). Similarly, Robinson and colleagues (2008) reported that the presence of symptoms of maternal depression during the immediate post-natal period were highly predictive of chronic child withdrawal and anxious/depressed symptomatology in the pre-school years. Early maternal depression and stress, in addition to inappropriate developmental expectations and harsh discipline, have been associated with child

externalising and internalising behaviours (Bayer et al., 2008). Early maternal anxiety, in addition to single parent status and inter-adult conflict have been identified as additional contributors to child internalising behaviours (Bayer et al., 2008).

Controlling for multiple risk factors, including maternal smoking, child gender, ethnicity, breastfeeding duration, and maternal depression, the experience of multiple stress events during pregnancy predict clinically significant levels of child internalising and externalising behaviours (Robinson et al., 2008). During the perinatal period, mothers are particularly susceptible to, and more likely to be subjected to, intense psychological difficulties, including symptoms of PTSD (Bosquet-Enlowa et al., 2011). Mothers' elicited stress responses are hypothesised to expose fetuses to elevated levels of the hormone cortisol which, in turn, could "prepare the fetus for a world the mother perceives as difficult and hence inattention and externalising behaviour may represent the child's behavioural adaptation to a stressful world" (Robinson et al., 2008, p. 1124). Maternal stress represents an important factor in the aetiology of child behavioural morbidity (Bosquet-Enlowa et al., 2011; Kaitz, Levy, Ebstein, Faraone, & Mankuta, 2009; Robinson et al., 2008).

A second theoretical pathway points to previously encountered stressors that can be categorised as *unresolved trauma or loss* (see Lyons-Ruth & Spielman, 2004). Initial research suggests that maternal PTSD symptoms may impact on child regulation via its impact on maternal caregiving (Bosquet-Enlowa et al., 2011).

Unresolved maternal losses have been associated with lower levels of positive emotion and authoritative parenting, and higher levels of anxiety, anger, and authoritarian parenting styles, in the presence of their husbands and children (Bosquet-Enlowa et al., 2011; Busch, Cowan, & Cowan, 2008). On the other hand, mothers who are more resolved with respect to their past experiences tend to demonstrate higher levels of sensitive guidance and coherence in their narrative descriptions of difficult events (Koren-Karie, Oppenheim, & Getzler-Yosef, 2008). This finding is particularly relevant to a number of the mothers interviewed in the present research who struggled to maintain coherence during family-of-origin narratives.

Unresolved trauma and loss may disrupt a mother's capacity to optimally provide a readily available secure base and regulate their infant's fear and distress, which is critical to children's feelings of security (Lyons-Ruth & Spielman, 2004). Further, when presented with intense exchanges within the attachment relationship, unresolved

trauma and loss may elicit frightened and frightening parental behaviour, eliciting the emergence of dissociated parental affect (Grienenberger et al., 2005). Frightened and deferential, or hostile and intrusive maternal behaviours are prevalent in insecure-disorganised attachment relationships, and are confusing and frightening for the child (Main & Hesse, 1990). These behaviours put the child in an impossible position. As discussed in the context of insecure-disorganised relationships, the distressed child instinctively tries to seek safety from the very attachment figure whose behaviour is the source of distress (Main & Hesse, 1990). Mentalisation-based interventions designed to address disruptions to the mother-baby attachment relationship and maternal negative attributions towards their children, precipitated by the mother's trauma history, have shown early promise (e.g., Schechter et al., 2006; Slade et al., 2005).

Taken together, it is recommended that future studies should seek to incorporate more precise measures of maternal mental health concerns and exposure to environmental stressors. These should include temporal demarcations related to the pre-pregnancy, pre-natal, and post-natal periods.

Important contributions to the literature stemming from genetic and twin studies should be incorporated into future research. Among children and adolescents, behavioural problems reportedly exhibit relatively strong heritability (Tremblay, 2010). However, Tremblay (2010) tempered these associations with the claim that genetic risk factors may only posit vulnerabilities for behaviour disorders, while other factors may play more of a role in their expression. These factors may include the environment, personality, cognition, and body size (Tremblay, 2010). Niv, Tuvblad, Raine, and Baker's (2013) recent twin study employed a behavioural genetics modeling approach to investigate antisocial behaviour amongst children aged 9 to 10 years. The authors reported that the variance in antisocial behaviour was accounted for by genetics (41%), shared environment (40%), and non-shared environment (19%). Similarly, molecular genetic studies have indicated that single gene interactions with single environmental characteristics have proven unfruitful (Tremblay, 2010).

Further, Rutter's (2012) review of the resilience literature concluded that longitudinal molecular genetic studies have not identified a significant main effect of genes on psychopathology. However, an inconsistent significant main effect of the environment, and a consistent significant effect of the interaction between genes and the environment were identified (Rutter, 2012). Acute life-stressors were associated with marginally significant interaction effects, whereas severe and chronic stressors,

including maltreatment, were associated with strong, significant interaction effects (Rutter, 2012). Rutter (2012) concluded that genes did not appear to cause mental disorders, but acted as predisposing factors that, in the face of an adverse environment, led to psychopathology.

Differences in phenotype may be best understood in a bio-psycho-social context, by considering the interactions of myriad genes with myriad environmental conditions (Tremblay, 2010). Supporting this position, Yanof (2012) posited that, “As with everything in human development, nature and nurture coalesce” (p. 119). Researchers are aware of the reciprocal relationship between the brain and early experience, specifically that the brain is modified by early experience, and the brain influences early experiences (Yanof, 2012).

Disruptions to the development of socially accepted behaviours are largely intergenerational, and attributable to complex contributions from genes and the encountered environment (Tremblay, 2010). As such, rather than narrowly focussing on environmental factors, future studies of children at risk for chronic levels of physical aggression should seek to explore the interaction between genes and the encountered environment (Tremblay, 2006). Meaney (2010) claimed that investigations of the causes of phenotypic differences between individuals should strive to avoid the partitioning of genetic and environmental influences where possible.

The field of developmental psychobiology has recently highlighted epigenetics as being at the cutting edge of research into the early development of complex traits (Meaney, 2010). Contributing a biologically-informed view of the interaction between genes and the environment, epigenetics explores variations in phenotype on the understanding that perinatal environmental conditions exert an influence on cellular functions, including structural alterations at the level of the genome (Meaney, 2010). Tremblay (2010, p. 355) defines epigenetics as those “mechanisms which program genes and can have a stable and lasting change in gene function without modifying its sequence. Mainly via changes in DNA methylation and chromatin structure.” DNA appears to possess a degree of *environmentally-driven plasticity* (Meaney, 2010). Specifically, the programming of gene function appears susceptible to chemical manipulation via environmental signals, particularly variations in maternal care within the context of the demands of the parental environment (Caldji, Hellstrom, Zhang, Diorio, & Meaney, 2011; Meaney, 2010; Tremblay, 2010). Such manipulations may exert an influence over the expression of genes and, in turn, phenotype (Caldji et al., 2011; Meaney,

2010; Tremblay, 2010).

In rat trials, Weaver and colleagues (2004) demonstrated that post-natal pup licking and grooming, and arched-back nursing, influenced phenotypic plasticity with regard to defensive responses to threat in offspring. Importantly, these effects were reportedly conveyed via DNA methylation, and appeared to be reversible via cross-fostering (Weaver et al., 2004). Indeed, evidence for both de-methylation and re-methylation of regions of the genome has been uncovered, which suggests promise for intervention programs (Caldji et al., 2011). Future studies should aim to contribute to this exciting body of literature.

The current research also limited its focus to maternal factors, however, the role of fathers emerged as an important theme in the qualitative interviews. While previous research has reported that paternal factors, such as paternal emotion coaching, do not appear to influence child aggression or anxiety and depression to the extent of the mother-child relationship (Katz & Windecker-Nelson, 2006), it has been reported that once the child reaches adolescence, the role of fathers may become more salient. Specifically, fathers appear to play a significant role in the separation-individuation process and the adolescents' progression toward autonomy (Benbassat & Priel, 2012). Father-focussed interventions appear to have the capacity to improve father's engagement with their children, the quality of marital relationships, and contribute toward the amelioration of problem child behaviors, with couples' group formats engendering the most robust and long-term positive outcomes, relative to fathers-only group formats or an absence of intervention (Cowan, Cowan, Pruett, Pruett, & Wong, 2009). However, the role of fathers in parent-child interactions and in the efficaciousness of interventions, remains largely unknown, and remains a crucial area for future research (Neander & Engström, 2009).

From a methodological perspective, the addition of fathers would also go some way toward addressing Achenbach and colleagues' (2003) claim that the modest-to-moderate correlations observed between the subjective ratings of different informants suggest that no single informant can be reliably substituted for all others in research and outcome studies.

9.4 Conclusion

Childhood aggression is understood to represent an aspect of normative development that assists in testing and defining autonomous boundaries (Yanof, 2012). The present research contributed to the literature by constructing and empirically verifying, via cross-sectional data, a cumulative-risk model of child aggression that pointed to associations with three risk factors, namely trauma exposure, low maternal RF, and low maternal emotion coaching. In addition three, mechanisms potentially underpinning the relationship between these risk factors and child outcomes were highlighted as important by the data, namely child PTS symptoms, adaptive emotion regulation, and emotion lability/negativity.

Taken together, the present research suggested that the occurrence of externalising behaviours, particularly aggression, could be at least partially understood with respect to early trauma exposure in concert with non-optimal parenting practices. This temporal sequence need be verified with longitudinal data in future studies. Interventions targeting the reduction of child post-traumatic symptoms, and the improvement of child emotion regulation, may provide viable and efficacious avenues for understanding and addressing problematic child behaviour.

The early familial environment, and the caregiver-child relationship in particular, provide the social context within which children usually have their first experiences of self and aggressiveness. Parental perceptions of these experiences appear to play an important role in influencing the way children perceive these experiences (Yanof, 2012). Further, the present research indicates that maternal capacity for reflective functioning and emotion coaching may play a significant role in the amelioration of the adverse effects of environmental stressors faced by their children, and their children's level of aggression.

The role of 'mother' is a critically important and often ambiguous endeavor. In order to attempt to respond sensitively to their child's communications and behaviours, mothers must undertake the simultaneously daunting, confusing, exciting, and rewarding task of striving to understand their child's complex, dynamic, and developing mind (Grienberger et al., 2005). Both the developmental research literature and accounts from clinical work indicate that parents are not equally well equipped to meet this difficult task (Grienberger et al., 2005).

The birth of a child may challenge, or require the modification of, a parent's psychological defenses, mental representations of self and others, and previously held

beliefs. However, the successful undertaking of such growth may require adequate levels of self-reflection and capacity for mentalisation (Grienenberger et al., 2005). The degree to which parents are able to individuate, and remain able to separate their own emotional needs from those of their child, especially during activation of their own attachment system during emotionally intense parent-child interactions, greatly influences the success with which a parent will be able to accomplish the task of understanding her child's mind (Grienenberger et al., 2005).

The current research noted that this task may be particularly challenging in the face of aggressive child behaviour, which tends to be associated with strong child negative affect and, in turn, a range of affective responses elicited in the mother. Assisting mothers to develop the levels of self-reflection and capacity for mentalisation required to best meet these challenges may represent an important goal for future interventions and the mental health and well-being of parents and children alike.

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Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

APPENDIX A

An Introduction to the Family Pathways Service

In order to best service the mental health needs of infants and children in Western Australia, a state-wide, multi-tiered service is required (Landy, 2011). Landy (2011) outlined a 4-Tier model that attempted to capture the nature of service provision for children and families with different levels of need. Broad and universal prevention strategies and services are categorised as Tier 1. Strategies and services that aim to attenuate the development of problematic outcomes by targeting at-risk infants, children, and their families, are categorised as Tier 2. Clinic-based interventions for high-risk infants, children, and their families, are categorised as Tier 3. Finally, outreach programs and specialised clinic-based treatments, which may incorporate home visits, multi-disciplinary assessment and treatment, and consultations with daycare or school environments, for severely at-risk infants, children, and families with complex needs, are categorised as Tier 4 (Landy, 2011).

Family Pathways is categorised as a Tier 4 early intervention service for children aged 4 to 12 years, with complex presentations. The service provides evidence-based multi-modal, and multi-disciplinary services, utilising models and theoretical approaches to practice that are appropriate for young at-risk children and families (Landy, 2011). Family Pathways also provides consultation, supervision, and training throughout the state (Landy, 2011).

Characteristically, child clients receiving assistance from Family Pathways present with symptom profiles that include difficulties with emotion regulation, behaviour regulation, and social interaction (Landy, 2011). Consonant with Browne, Cashin, and Graham (2012), child clients present with a number of co-morbid difficulties, or clinical diagnoses. In addition, they tend to present with familial and developmental histories characterised by a range of extreme risk factors, including significant traumas, loss, family dysfunction, and family violence, and a marked paucity of protective factors (Landy, 2011). Often, numerous clinical assessments have been previously conducted, though the outcomes and recommendations of these have rarely been considered or integrated in a holistic manner (Landy, 2011).

The families serviced by Family Pathways tend to have few supports, both within the family structure, and with regard to the external systems and networks around them (Landy, 2011). Chaotic or unpredictable circumstances that include ongoing domestic

violence, substance abuse, or psychological disorders are common. Such family environments are unfavourable for the formation and maintenance of secure attachment relationships, establishment of appropriate routines, and enforcement of consistent limits and boundaries. Together, these factors can make it difficult for children, parents, and families as a whole to attend recurring scheduled appointments, or commit to standardised, evidence-based approaches (Landy, 2011).

APPENDIX B

Ethical Clearances



Memorandum

To	Dr Lynn Priddis, School of Psychology and Speech Pathology
From	A/Professor Stephan Millett, Chair, Human Research Ethics Committee
Subject	Protocol Approval HR 110/2010
Date	10 November 2010
Copy	Dr Kevin Runions School of Psychology and Speech Pathology Dr Robert Kane School of Psychology and Speech Pathology Darren Moroney School of Psychology and Speech Pathology

Office of Research and Development

Human Research Ethics Committee

TELEPHONE 9266 2784

FACSIMILE 9266 3793

EMAIL hrec@curtin.edu.au

Thank you for providing the additional information for the project titled "*Exploring the Role of Mother-Child Relationships in the Context of Early Environmental Stressors*". The information you have provided has satisfactorily addressed the queries raised by the Committee. Your application is now **approved**.

- You have ethics clearance to undertake the research as stated in your proposal.
- The approval number for your project is **HR 110/2010**. Please quote this number in any future correspondence.
- Approval of this project is for a period of twelve months **29-10-10** to **29-10-11**. To renew this approval a completed Form B (attached) must be submitted before the expiry date **29-10-11**.
- If you are a Higher Degree by Research student, data collection must not begin before your Application for Candidacy is approved by your Faculty Graduate Studies Committee.
- The following standard statement **must be** included in the information sheet to participants:
This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR 110/2010). The Committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. Its main role is to protect participants. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.

Applicants should note the following:

It is the policy of the HREC to conduct random audits on a percentage of approved projects. These audits may be conducted at any time after the project starts. In cases where the HREC considers that there may be a risk of adverse events, or where participants may be especially vulnerable, the HREC may request the chief investigator to provide an outcomes report, including information on follow-up of participants.

The attached **FORM B** should be completed and returned to the Secretary, HREC, C/- Office of Research & Development:

When the project has finished, or

- If at any time during the twelve months changes/amendments occur, or
- If a serious or unexpected adverse event occurs, or
- 14 days prior to the expiry date if renewal is required.
- An application for renewal may be made with a Form B three years running, after which a new application form (Form A), providing comprehensive details, must be submitted.

Regards,

SM A/Professor Stephan Millett
Chair Human Research Ethics Committee



Government of Western Australia
Department of Education

Your ref :
Our ref : D11/0163271
Enquiries :

Dr Lynn Priddis
School of Psychology and Speech Pathology
Faculty of Health Sciences
Curtin University of Technology
GPO Box U1987
Perth WA 6845

Dear Dr Priddis

Thank you for your completed application received 1st December 2010 to conduct research on Department of Education sites.

The focus and outcomes of your research project, *Exploring the role of mother-child relationships in the context of early environmental stressors*, are of interest to the Department. I give permission for you to approach site managers to invite their participation in the project as outlined in your application. It is a condition of approval, however, that upon conclusion the results of this study are forwarded to the Department at the email address below.

Consistent with Department policy, participation in your research project will be the decision of the schools invited to participate, the children in those schools and their parents. A copy of this letter must be provided to site managers when requesting their participation in the research. Researchers are required to sign a confidential declaration and provide a current Working with Children Check upon arrival at the Department of Education site.

Responsibility for quality control of ethics and methodology of the proposed research resides with the institution supervising the research. The Department notes a copy of a letter confirming that you have received ethical approval of your research protocol from the Curtin HREC.

Any proposed changes to the research project will need to be submitted for Department approval prior to implementation.

Please contact Ms Penelope Kennish, Senior Evaluation Officer, on 9264 5512 or researchandpolicy@det.wa.edu.au if you have further enquiries.

Very best wishes for the successful completion of your project.

Yours sincerely

ALAN DODSON
DIRECTOR
EVALUATION AND ACCOUNTABILITY

11 March 2011

151 Royal Street, East Perth Western Australia 6004



Government of **Western Australia**
 Department of **Health**
 Child and Adolescent Health Service

PMH ETHICS COMMITTEE ANNUAL PROGRESS REPORT

Please type responses, (handwritten responses not accepted) single sided .

This Annual Report should not include amendments or extension requests – these should be submitted separately to the Ethics Committee for approval
Information updating details of staff certification, accreditation, professional indemnity and the like should be attached to this form.

Registration Number	1872/EP
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Project Title	Exploring the role of mother-child relationships in the context of early environmental stressors
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Approval Date	4 April 2011
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Chief Investigator	Dr Lynn Priddis
---------------------------	-----------------

Title	Dr	First Name	Lynn	Surname	Priddis
Institution	Curtin University				
Department	Psychology				
Phone	9266 3297	Email	L.Priddis@exchange.curtin.edu.au		
Address (to which correspondence should be sent)	School of Psychology and Speech Pathology Faculty of Health Sciences Curtin University GPO Box U1987 Perth, Western Australia, 6845				

Aim of the study :

- Investigate the consequences of child trauma exposure within the context of the mother-child attachment relationship.
- Investigate the relationships between child trauma history, maternal parenting factors, child emotion regulation, and child behavioural outcomes in a large community sample (Study 1) and a smaller sample of children referred to Family Pathways for behaviour-related clinical services (current Study).
- Provide potential avenues to inform the development of more efficacious interventions that may be implemented at the clinical, family, and school level.

Has the project started? ☒ Yes ☐ No

Has the protocol changed from that originally approved? ☐ Yes ☒ No

Have these changes received Ethics Committee approval? ☐ Yes ☐ No

If No, please detail changes

Number of subjects to be recruited	6
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Number of subjects studied to date	9
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APPENDIX C

Principal Information Sheet and Consent Form



Department of
Education

Project Title: Exploring the Role of Mother-Child Relationships in the Context of Early Environmental Stressors

Information Letter for Principals

Thank you for considering your schools' participation in our study.

Recently, there has been a surge of interest amongst researchers, parents, and teachers alike in coming to a better understanding of children who exhibit problematic behavior, and how best to assist these children and their families. A number of recent studies have highlighted the role of (1) capacity for emotion regulation, and (2) the affects of exposure to environmental stressors.

In our study, we hope to further explore the roles that child emotion regulation and exposure to environmental stressors play in determining child behavior via a series of 6 short questionnaires that mothers will complete in relation to one of their children. These questionnaires enquire about:

- Difficult experiences the child may have faced, such as the loss of a loved one
- How well the child seems able to control aspects of his or her emotions
- Attitudes regarding the understanding of her child's behavior
- Attitudes regarding how her child should deal with his or her feelings

This study of children in the regular school system is part of a larger PhD research project being conducted by Curtin University in conjunction with Family Pathways (Princess Margaret Hospital).

What do we require from schools?

1. During an initial meeting, Principals who are willing for their school to participate, inform the researcher (Darren Moroney) of the number of students in Grades 1-4 (or a subset of these if some classes have existing commitments to other studies).
2. The researcher will then provide 1 pack (Information Sheet, Consent Form, Questionnaire Booklet, reply-paid envelope) per student.
3. Teachers are asked to distribute the packs to their students to be taken home and completed by mothers who are willing to participate. **This is the end of the schools' involvement.**

What do we require from mothers?

- Each Questionnaire Booklet contains an Information Sheet and Consent Form for parental consideration prior to making the decision to participate.
- Mothers who do decide to participate fill out the 6 Questionnaires and then mail them (reply-paid) back to the researcher.

What is in it for mothers who participate?

- When we receive completed Questionnaire Booklets, a **Coles Gift Card** will be mailed back to the parent as a token of our appreciation.

If you would like more information:

- I am more than happy to arrange a time to meet with you, speak on the phone, or via email to discuss the study further.
- If you would like further information about the study, please feel free to contact me via phone: 04 03 01 4617, or email: darren.moroney@postgrad.curtin.edu.au
- Alternatively, you can contact my supervisor (Dr Lynn Priddis) on 9266-3297, or via email: l.priddis@curtin.edu.au
- Participants in this study will be voluntarily contributing to research conducted as part of the Doctor of Philosophy (Counselling Psychology) program at Curtin University.

Please find attached:

- Ethical approval notices from Curtin University and DET/Catholic Education Office

This Information Letter is for you to keep.

Principal researchers

Darren Moroney
Ph: 04 03 01 4617
Email: darren.moroney@postgrad.curtin.edu.au

Dr. Lynn Priddis
Ph: 9266 3297
Email: l.priddis@curtin.edu.au

WE REALLY APPRECIATE YOUR HELP!



This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR 110/2010). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845, or by telephoning 9266 2784, or emailing hrec@curtin.edu.au



Department of
Education

Principal Consent Form

Project Title: Exploring the Role of Mother-Child Relationships in the Context of Early Environmental Stressors

Principal researchers

Darren Moroney
Email: darren.moroney@postgrad.curtin.edu.au

Dr. Lynn Priddis
Email: l.priddis@curtin.edu.au
Ph: 9266 3297

I have read the information on the attached Information Sheet. Any questions I have asked have been answered to my satisfaction. I agree to my school's participation in this research, and understand that I may revoke this consent at any time.

I understand that all the information provided is treated as confidential.

I agree that information gathered for this study may be published provided names and/or any other information that may identify either my school, its students, or parental participants is not used.

Name _____

School _____

Signature _____

Date ____/____/____

The Human Research Ethics Committee at Curtin University of Technology requires that all participants are informed that if they have any complaint regarding the manner in which a research project is conducted, it may be directed to the investigator, the supervisor, or alternatively to the Secretary, Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845, or by telephoning 9266 2784, or emailing hrec@curtin.edu.au

APPENDIX D

Parent Information Sheet and Consent Form – Community Sample



Department of
Education

Project Title: Exploring the Role of Mother-Child Relationships in the Context of Early Environmental Stressors

Information Letter for Parents

Thank you for considering participating in our research project.

Recently, there has been a surge of interest amongst researchers, parents, and teachers alike in coming to a better understanding of why some children exhibit problematic behavior, and how best to assist these children and their families. A number of recent studies have highlighted the role of emotion regulation, and the impact that difficult events may have on children.

In our study, we plan to explore these factors using a series of 6 short questionnaires that we hope mothers will complete in relation to **one** of their children. These questionnaires enquire about:

- Difficult experiences your child may have faced, such as the loss of a loved one
- The manner in which you child expresses his or her emotions
- Your thoughts about your child's behavior
- Your thoughts about how your child deals with his or her feelings

This study of children in the regular school system is part of a larger PhD research project being conducted by Curtin University in conjunction with Princess Margaret Hospital.

What would you be asked to do?

1. After reading this Information Sheet, sign the **Consent Form** on the front of the Questionnaire Booklet.
2. Complete the 'Basic Information About Your Family' page.
3. Complete the 6 short Questionnaires contained inside the Questionnaire Booklet, with respect to **one** of your children (who is between 5 and 12 years of age).
4. Place the completed Questionnaire Booklet in the stamped, self-addressed envelope provided and pop it in the mail back to us! (You do **not** need to purchase a stamp).

Do you get anything for filling in the Questionnaires?

- *Yes!* When we receive your completed Questionnaire Booklet in the mail, we will arrange for a **\$10 Coles Gift Card** to be mailed to you as a token of our appreciation.

Maintaining your Privacy

- If you would like to participate, but do not want to print your name on the Questionnaire Booklet, you do **NOT** need to print your name.
- If you choose to include your phone number, we will only use it to call you to say 'Thank you' and to arrange for some movie tickets to be mailed to you.

Do you have to do this?

- *No*. Deciding whether you will or won't participate in this research, or if it is appropriate for your family, is entirely up to you.

If you would like more information:

- Participants in this study will be voluntarily contributing to research conducted as part of the PhD (Counselling Psychology) program at Curtin University.
- If you would like further information about the study, please feel free to contact me via email: darren.moroney@postgrad.curtin.edu.au. Alternatively, you can contact my supervisor (Dr Lynn Priddis) on 9266-3297, or via email: lpriddis@curtin.edu.au.
- This Information Letter is for you to keep.

Principal researchers*Darren Moroney*Email: darren.moroney@postgrad.curtin.edu.au*Dr. Lynn Priddis*Email: lpriddis@curtin.edu.au

Ph: 9266 3297

WE REALLY APPRECIATE YOUR HELP!

This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR 110/2010). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845, or by telephoning 9266 2784, or emailing hrec@curtin.edu.au



Department of
Education

Consent Form

Project Title: Exploring the Role of Mother-Child Relationships in the Context of Early Environmental Stressors

Principal researchers

Darren Moroney
Email: darren.moroney@postgrad.curtin.edu.au

Dr. Lynn Priddis
Email: l.priddis@curtin.edu.au
Ph: 9266 3297

I have read the information on the attached Information Sheet. Any questions I have asked have been answered to my satisfaction. I agree to participate in this research, and understand that I can change my mind or stop at any time.

I understand that all the information I provide is treated as confidential.

I agree that information gathered for this study may be published provided names and/or any other information that may identify either myself or my child is **not** used.

Name (Optional) _____

Signature _____ Date ____/____/____

☐ (Optional) If you would be interested in participating in a short, informal interview with a researcher about your experiences as a parent to assist with a different aspect of this research, please tick the checkbox.

To claim your \$10 Coles Gift Card, please enter your details at the end of the Questionnaire

The Human Research Ethics Committee at Curtin University of Technology requires that all participants are informed that if they have any complaint regarding the manner in which a research project is conducted, it may be directed to the investigator, the supervisor, or alternatively to the Secretary, Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845, or by telephoning 9266 2784, or emailing hrec@curtin.edu.au

APPENDIX E

Parent Information Sheet, Consent Form, and Consent for Child Form – Clinical Sample

FORM 3A



Government of **Western Australia**
Department of **Health**
Child and Adolescent Health Service



PARENT INFORMATION SHEET

Title of Study: Exploring the Role of Mother-Child Relationships in the Context of Early Environmental Stressors

Why are we doing the study?

- Thank you for taking the time to think about taking part in our research project.
- In our study, we are exploring a number of factors that might be linked to child behaviour.
- In particular, we hope to find out more about the difficult experiences children may have faced while growing up, such as the loss of a loved one.
- We also hope to find out more about how well children control their emotions.
- Finally, we are interested in learning about your thoughts as a parent, and how you think children learn about feelings and appropriate behaviour.

Who is carrying out the study?

- Researchers from Curtin University, in conjunction with the staff at Family Pathways.

What will you be asked to do if you decide to take part in this study?

1. As part of the intake procedures at Family Pathways, you would have filled out a number of questionnaires. To help us with our research, we ask that you allow us (the researchers) to access six of the questionnaires you have filled in (PROPS, LITE-P, ERC, MESQ, PRFQ, CBCL).
2. Your child would have filled out a number of questionnaires as well. To help us with our research, we ask that you allow us to access your child's responses to one of the questionnaires he/she has filled in (CROPS).
3. Your Family Pathways case co-ordinator will also ask you if you would like to partake in an informal interview in which you will be asked to discuss some of your thoughts and feelings about your child. The interview will be audio tape recorded. We ask that you allow us (the researchers) to access the transcript of your responses.

Do I have to take part? Does my child have to take part?

- **No.** Participation is entirely voluntary.
- However, we would appreciate your involvement and believe that the data we collect will assist us in better understanding child behaviour problems and providing better services for the children and families who come to Family Pathways.

What about my privacy?

1. **Before** allowing us to access your responses or your child's responses, your Family Pathways case co-ordinator will ask you to sign a Consent Form, which says that you are happy for us to do so.
2. Your Family Pathways case co-ordinator will remove any identifying information, such as your name and your child's name before the researchers see any of your responses. In this way, **you remain anonymous**, and your privacy is maintained.
3. For our research, we will only need to know:
 - a. Your child's gender, and
 - b. Your child's age in years and months (eg., 7 years, 4 months).

FORM 3A

What are the possible discomforts and/or inconveniences?

- For the interview, a Family Pathways staff member will meet with you at a convenient time and ask you some questions about your thoughts and feelings about your child, your relationship with your child, your experience of the joys and upheavals of parenting, and a bit about your family history. The interview will take about 50-70 minutes.
- Due to the personal nature of the information to be discussed during the interview, you are reminded that you retain the right to withdraw at any time, and can decide not to answer any question that you do not feel comfortable answering.
- Though it is very unlikely, should you experience any distress as a result of the interview, psychological services are available to you at the Curtin Psychology Clinic (Ph: 9266-3436), or Communicare (Ph: 9251 5777). You can also discuss the interview with your case coordinator.

Where is your information kept?

- Your personal information is kept at Family Pathways.
- The information that is collected by the Curtin researchers will **not** have your name or your child's name or any identifying information on it. This data will be kept in a locked office within the School of Psychology at Curtin University.
- Overall results of the study can be requested, and can be provided after completion of the study.

Who has approved the study?

- This study has been approved by Curtin University and PMH.

Who to contact for more information about this study:

If you would like any more information about this study, please do not hesitate to contact one of the research team. They are very happy to answer your questions.

Family Pathways:

Dr Sarah Landy (Chief Investigator, Family Pathways)

Ph: 9382 0730

E: Sarah.Landy@health.wa.gov.au

Curtin University:

Dr. Lynn Priddis (Chief Investigator, Curtin)

Ph: 9266 3297

E: L.Priddis@curtin.edu.au

Darren Moroney (PhD Researcher)

Ph: 9266 2758

E: darren.moroney@postgrad.curtin.edu.au

Who to contact if you have any concerns about the organisation or running of the study?

If you have any concerns or complaints regarding this study, you can contact the Director of Medical Services at PMH (Ph: (08) 9340 8222). Your concerns will be drawn to the attention of the Ethics Committee who is monitoring the study.

What to do next if you would like to take part in this research:

- If you would like to take part, please read and sign the Consent Form.

THANK YOU FOR YOUR TIME!



Government of **Western Australia**
Department of **Health**
Child and Adolescent Health Service



FORM OF CONSENT (For Adult)

PLEASE NOTE THAT PARTICIPATION IN RESEARCH STUDIES IS VOLUNTARY AND SUBJECTS CAN WITHDRAW AT ANY TIME WITH NO IMPACT ON CURRENT OR FUTURE CARE.

I have read

Given Names	Surname
-------------	---------

the information explaining the study entitled

I have read and understood the information given to me. Any questions I have asked have been answered to my satisfaction.

I understand I may withdraw from the study at any stage and withdrawal will not interfere with routine care.

I agree for the interview to be tape recorded (audio).

I agree that research data gathered from the results of this study may be published, provided that names are not used.

Dated day of 20

Signature

I, have explained the above to the
(Staff member's full name)

signatory who stated that he/she understood the same.

Signature

FORM 5A



Government of **Western Australia**
Department of **Health**
Child and Adolescent Health Service



FORM OF CONSENT (For Parent/Guardian)

PLEASE NOTE THAT PARTICIPATION IN RESEARCH STUDIES IS VOLUNTARY AND SUBJECTS CAN WITHDRAW AT ANY TIME WITH NO IMPACT ON CURRENT OR FUTURE CARE.

I have read

Given Names	Surname
-------------	---------

the information explaining the study entitled

I have read and understood the information given to me. Any questions I have asked have been answered to my satisfaction.

I agree to allow

(full name of participant and relationship of participant to signatory)

to participate in the study.

I understand my child may withdraw from the study at any stage and withdrawal will not interfere with routine care.

I agree that research data gathered from the results of this study may be published, provided that names are not used.

Dated day of 20

Parent or Guardian's Signature

I, have explained the above to the
(Staff member's full name)

signatories who stated that he/she understood the same.

Signature

APPENDIX F

Child Information Sheet and Assent Form – Clinical Sample

FORM 3B



Government of **Western Australia**
Department of **Health**
Child and Adolescent Health Service



CHILD INFORMATION SHEET

Title of Study: Exploring the Role of Mother-Child Relationships in the Context of Early Environmental Stressors

Why are we doing the study?

- Thanks for thinking about helping us out!
- In our study, we are interested in learning about the way kids think about bad things that have happened or might happen, and the things that they do about them.

Who is doing the study?

- Researchers from Curtin University are doing the research with the help of the staff at Family Pathways.

What would you have to do?

- By now, you would have filled out a few questionnaires with your Family Pathways case co-ordinator. We would just like to know about the responses you put down for the one called 'CROPS'.

Do you have to do this?

- No, it's totally up to you!
- But, we would really appreciate knowing about what you think!

Who will know it's your questionnaire?

- Only you and your Family pathways case co-ordinator!
- Before they give it to us, they take your name off it, so we won't know who you are.

What are the possible discomforts and/or inconveniences?

- There shouldn't be any, but you can always ask any of the staff at Family Pathways anything that you want to know about this.

FORM 3B

Where is your information kept?

- Your personal information is kept at Family Pathways.
- The information that is collected by the Curtin researchers will **not** have your name or any identifying information on it. This data will be kept in a locked office within the School of Psychology at Curtin University.
- Overall results of the study can be requested, and can be provided after completion of the study.

Who has approved the study?

- This study has been approved by Curtin University and PMH.

Who to contact for more information about this study:

If you would like any more information about this study, please do not hesitate to contact one of the research team. They are very happy to answer your questions.

Family Pathways:

Dr Sarah Landy (Chief Investigator, Family Pathways)

Ph: 9382 0730

E: Sarah.Landy@health.wa.gov.au

Curtin University:

Dr. Lynn Priddis (Chief Investigator, Curtin)

Ph: 9266 3297

E: L.Priddis@curtin.edu.au

Darren Moroney (PhD Researcher)

Ph: 9266 2758

E: darren.moroney@postgrad.curtin.edu.au

Who to contact if you have any concerns about the organisation or running of the study?

If you have any concerns or complaints regarding this study, you can contact the Director of Medical Services at PMH (Ph: (08) 9340 8222). Your concerns will be drawn to the attention of the Ethics Committee who is monitoring the study.

What to do next if you would like to take part in this research:

- If you would like to take part, please read and sign the Consent Form.

THANK YOU!

FORM 5A



Government of **Western Australia**
Department of **Health**
Child and Adolescent Health Service



FORM OF ASSENT (For Child)

PLEASE NOTE THAT PARTICIPATION IN RESEARCH STUDIES IS VOLUNTARY AND SUBJECTS CAN WITHDRAW AT ANY TIME WITH NO IMPACT ON CURRENT OR FUTURE CARE.

I have read

Given Names	Surname
-------------	---------

the information explaining the study entitled

I have read and understood the information given to me. Any questions I have asked have been answered to my satisfaction.

I understand I may withdraw from the study at any stage and withdrawal will not interfere with routine care.

I agree that research data gathered from the results of this study may be published, provided that names are not used.

Dated day of 20

Signature

I, have explained the above to the
(Staff member's full name)

signatory who stated that he/she understood the same.

Signature